1	WES	TERN AREA POWER ADMINISTRATION
2		SIERRA NEVADA REGION
3		
4	The Central V	Valley Project - Rate Order WAPA - 194
5	Notice of Prop	posed Formula Rates for Energy Imbalance
6	Market Serv	vices, Sale of Surplus Products, and
7	Revisions to 1	Existing Energy Imbalance and Generator
8		Imbalance Rate Schedules.
9		
10	Public :	Information Forum August 17, 2020
11		
12		9:00 A.M.
13		
14		Web Ex
15	WEST	TERN AREA POWER ADMINISTRATION
16	114 PAI	RKSHORE DRIVE FOLSOM, CALIFORNIA
17		
18		
19	DATE:	Monday, August 17, 2020
20	TIME:	9:00 a.m.
21	LOCATION:	Web Ex
22	REPORTED BY:	Gigi Lastra, Notary Public
23	JOB No.:	4219269
24		
25		
		Page 1

1	APPEARANCES
2	Koji Kawamura , Attorney-Advisor
3	Amy Burrow
4	Ansel Lundberg
5	Bill Hughes
6	Brian Schinstock
7	Bruce McLaughlin
8	Bryan Crabtree
9	Carl Dobbs
10	Cary Fox
11	Dave Olivares
12	Frank DePalma
13	Fred DeAnda
14	Frederick Jones
15	Howard Hirhara
16	Jarrod Czinski
17	Jeff Fruit
18	Jim Shetler
19	John Cummins
20	Josh Blake
21	Kelly Campbell
22	Lena Perkins
23	Melinda Rolo
2 4	Michelle Gonzales
25	Nicola Costello
	Page 2

1	Padmini Palwe
2	Piyush Amin
3	Regina Rieger
4	Richard Buckingham
5	Roberta Roberts
6	Rodney Bailey
7	Rosemary Jones
8	Sandee Peebles
9	Scott Baker
10	Stephen Mariani
11	Tasnim Aslam
12	Vela Wann
13	Tong Wu
14	Willie Manuel
15	
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2 4	
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	Page 3

1	PROCEEDINGS
2	KOJI KAWAMURA: All right, we can go
3	ahead and go on the record now.
4	AUTOMATED VOICE: This meeting is being
5	recorded.
6	KOJI KAWAMURA: Good morning and
7	welcome to WebEx for Western Area Power Administration
8	public information forum on the proposed formula rates
9	for the energy imbalance market services, sale of
LO	surplus products, revisions to existing energy
L1	imbalance and generator imbalance rates schedules.
L2	Rate order WAPA 194.
L3	My name's Koji Kawamura, and I'm an
L4	attorney with the office of general counsel, and I'm
L5	going to be providing as the moderator for today's
L6	information forum.
L7	Before we start the presentations, I
L8	want to address a few housekeeping issues. I want
L9	everyone to be aware that a verbatim transcript of
20	today's forum is being prepared by our court reporter.
21	Everything being said while we are in session today
22	together with all documents presented will be part of
23	the official record.
24	You can purchase a copy of today's
25	transcript directly through the court reporter. The

Τ	court reporter's name, address and telephone number
2	will be available from WAPA upon request. Copies of
3	the transcripts will also be available for review at
4	WAPA's Sierra Nevada customer service regions as well
5	as on the public rates websites.
6	Because of COVID, we're still avoiding
7	large in-person meetings, and I want to thank
8	everybody for attending this virtual meeting. Given
9	the logistics of large virtual meetings, to avoid
10	microphone feedback, we're muting everyone but the
11	speaker.
12	If you have any questions, please use
13	the chat feature on the WebEx or raise your virtual
14	hand. We will open up the lines after each of the
15	speakers is done, so if you're on the phone you can
16	ask questions.
17	In addition, if you had chat questions
18	or if you raise your hands we'll take those questions
19	at the end of the presentation. The way we'll kind of
20	do those is we'll take the questions of the people who
21	have asked questions in chat, then we'll take those
22	raised hands, and then finally we'll open up the phone
23	lines.
24	I want to make sure that we get an
25	accurate attendance of today's proceedings and so for

1	hose individuals who have signed in via WebEx, we
2	already have your name and organizations you
3	represented. For those people who've dialed in, we're
4	going to go ahead and open up the telephone lines now
5	so you can introduce yourselves. Please give your
6	name and the organization you represent. Tony, if you
7	can go on ahead and open up the phone lines now so we
8	can get an introduction of the folks who are on the
9	phone.
LO	TONY HENRIQUEZ: Okay. So, the first
L1	person that I'm going to unmute looks like their phone
L2	number it doesn't give me the last four, it gives
L3	me the first six. So, their phone number starts with
L4	916-781 and I know that's going to be pretty general
L5	so I'm going to unmute that person and see if they can
L6	speak. Well, it's not giving any option to unmute
L7	him. Awesome. Let me close this panel and start
L8	see if it gives me a better panel. Sorry about that.
L9	Sorry, working my way through this
20	portion. Great. Okay. I apologize for that. It's
21	just not giving me the option to
22	KOJI KAWAMURA: Tony, well, I'll let
23	you try to figure that out and we will give people the
24	opportunity on the phone to introduce yourselves here
25	once Tony figures that out and we'll try again in a

1	little bit. But I'm going to go ahead and proceed.
2	Most, if not all of you, should've received a letter
3	or email for WAPA informing you of today's public
4	information forum.
5	WAPA also published a notice of
6	today's information forum in the July 31, 2020 Federal
7	Register, Volume 85, Page 46803. Notice was also
8	published on WAPA's website.
9	We are meeting today, August 17th, for
10	this information forum. In today's information forum,
11	WAPA will present the proposed formula rates for the
12	energy imbalance market services, sale of surplus
13	products and revisions to the existing energy
14	imbalance and generator imbalance.
15	I want to note one modification to the
16	Federal Register notice. The Federal Register notice
17	stated the proposed rate will go into effect on April
18	1, 2021. After the publication of the notice, the
19	Balancing Authority of Northern California and
20	California ISO approached WAPA and requested to move
21	up the EIM implementation to March 25th. WAPA's rates
22	manager will provide more details about this in her
23	presentation. Given the need to move up the
24	implementation date, WAPA proposes that the effective
25	date will now be March 25, 2021, instead of April 1,

1	2021.
2	WAPA will continually update its rates
3	webpage to provide you the most up to date
4	information. If you're interested in following this
5	process, please refer to WAPA's webpage to stay up to
6	date. As noticed in the Federal Register, on WAPA's
7	webpage, WAPA will hold a public comment forum later
8	today, August 17, 2020. The comment forum will start
9	at 1 p.m. You may hold your comments for the comment
10	forum or you may submit your comments in writing at
11	any point during the comment period. The comment
12	period ends on October 29, 2020. All comments must be
13	received by that date to be considered.
14	So, that issue?
15	TONY HENRIQUEZ: I have. I apologize.
16	It was. So, it's ready to go.
17	KOJI KAWAMURA: All right. So, I'm
18	going to take this opportunity and we're going to go
19	on ahead and let the people on the phone introduce
20	themselves.
21	TONY HENRIQUEZ: Okay. Again, I have
22	unmuted phone number 530-209.
23	BRIAN SCHINSTOCK: That might be me.
24	Brian Schinstock with Roseville.
25	TONY HENRIQUEZ: Will you say your name
	Page 8

1	again, please?
2	BRIAN SCHINSTOCK: Yeah. Brian
3	Schinstock.
4	TONY HENRIQUEZ: And can you spell your
5	last name?
6	BRIAN SCHINSTOCK: Yep. S-C-H-I-N-S-T-
7	O-C-K.
8	TONY HENRIQUEZ: Thank you. Okay, I'm
9	going ahead and unmute the next phone-in caller, and
10	it looks like the phone number starts with 530-220.
11	DAVID TROMBLEE: David Tromblee from
12	U.C. Davis.
13	TONY HENRIQUEZ: Thank you, David. And
14	the next numbers looks like their number starts with
15	530-941. So, call in user 530-941? If you are muted,
16	just in case you are muted double-muted on your
17	end, I don't hear anything. Okay. I guess we can try
18	him again later, Koji?
19	KOJI KAWAMURA: Yeah, that's fine.
20	TONY HENRIQUEZ: Okay. That was the
21	only three call-in numbers that I show on the screen.
22	KOJI KAWAMURA: All right, thank you,
23	Tony. At this point I'm going to go ahead and
24	introduce WAPA's panel, and as we go through the
25	presentation, please hold your questions for the end.
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1 At the end of each presentation we'll give people the 2 opportunity to ask questions and comments. 3 And, again, the panelists for today are Arun Sethi, who is WAPA's power marketing manager, 4 5 Autumn Wolfe, who is WAPA's rate manager, Tong Wu, 6 settlement manager, Robert Delizo, resources and scheduling manager, Rosemary Jones, power marketing 8 advisor, and we also have a panel of subject matter 9 experts who will be standing by to help answer any 10 questions. And with that, I'm going to go ahead and 11 turn this over to Autumn, who will be doing the first presentation -- unless Arun, do you want to say 12 13 something first? AUTUMN WOLFE: Okay, I will get started 14 Thank you, Koji. As Koji mentioned, my name is 15 here. 16 Autumn Wolfe and I'm the rates manager here at WAPA's 17 Sierra Nevada region. I'll be presenting on several different topics throughout the presentation this 18 morning. First, I'd like to start with just a few 19 20 WebEx housekeeping items prior to walking us through the morning agenda. 2.1 22 So, most of this Koji already covered but before starting, I'd like to just let everybody 23 24 know that the agenda and today's presentation are attached to the calendar invitation for this morning's 25

1 meeting just in case you're not able to join the WebEx 2 on your computer. 3 Also, the agenda and the presentation are posted on our WAPA rate case website as well. So, 4 5 those are two places you can find the presentation that we're going through this morning. 6 So, for the WebEx housekeeping items, 8 like we said, Koji mentioned that when you log on, 9 you're automatically put on mute and that there'll be time for questions at the end of each section of the 10 11 presentation, so we make sure we pause to get 12 everybody an opportunity to ask any clarifying 13 questions they may have. 14 And there's one of three options you 15 can use for asking your question: You can send your 16 questions to the host using the WebEx chat feature, 17 you can raise your hand by pressing the raised hand icon next to your name in the participation list, or 18 19 if you're participating by phone, when prompted we'll 20 open the phone lines for you to ask your question. And if you are on the phone, you may have to press 21 star-6 from your phone to unmute yourself. 22 23 So, some questions you might have may 24 be answered in other portions of the presentation but please feel free to ask your questions as we go along 25

1	at the end of each portion. We should have time for
2	additional questions at the end of the meeting, so
3	there will be that opportunity as well.
4	And then just a reminder. When you are
5	asking your questions, make sure you're not double-
6	muted. As we mentioned, when you log on, you're muted
7	and then when we open your phone line for you to speak
8	and ask your question you might have to hit star-6 as
9	well to unmute yourself again. We call it double-
LO	muting. We want to make sure that we hear you when
L1	you have your question. Next slide.
L2	For today's agenda, we already heard
L3	opening remarks from Koji, and I just walked you
L4	through the housekeeping items. I'll also be
L 5	presenting on our rates process timeline, and then
L6	I'll give a brief overview of the California
L7	Independent System Operator EIM.
L8	Then I'll talk about EIM
L9	implementation's ongoing costs and the allocation of
20	EIM charges before turning the presentation over to
21	Dr. Tong Wu, our settlements manager, who will share
22	more specific information on the different EIM charges
23	that could be allocated to WAPA.
24	Then we will learn about EIM resource
25	valuation from Robert Delizo, our resources and
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1	scheduling manager before I present again on the
2	proposed formula rates. Then we will have Rosemary
3	Jones, our power marketing and energy services
4	specialist share information on the sale of surplus
5	products. And then we will hear form Robert Delizo
б	again for him to share information on EIM generation
7	dispatch ranges.
8	At the end of the presentation I'd like
9	to share some web links with you about where you can
10	find additional EIM resources, and then Koji will have
11	closing remarks for us. Next slide. Okay, so before
12	we jump into the main portion of the presentation,
13	I'd like to share with you our rate process timeline.
14	Next slide.
15	On July 31st we posted our proposed
16	federal register notice, which kicked off our 90-day
17	comment period for rate case 194. And today, as Koji
18	mentioned, is our public information forum this
19	morning, and this afternoon we have the public
20	comment forum beginning at one, and that will go
21	until all comments are received, but no later than 4
22	o'clock this afternoon.
23	October 29th is the end our 90-day
24	comment period for rate case 194 and we anticipate
25	

1 our final federal register notice will be published 2 for rate case 194. And then as Koji mentioned, March 25, 2021 is the new -- is when our new rate schedules 3 become effective and we are live in EIM -- in the EIM 4 5 market. 6 So, for more information we do have a 7 formal calendar posted to our website at the link 8 that's on the screen, and this is just a good place 9 where you can go to reference where we're at in our proposed timeline. Sometimes there's a little bit of 10 11 shift in dates, but the calendar we have posted online 12 has more specific details regarding our timeline. 13 Next slide. Okay, we're going to start today's 14 15 presentation with a very high level overview of the 16 California Independent System Operator Energy 17 Imbalance Market, or EIM as we call it. Next slide. 18 EIM is a real-time energy market so it 19 will not impact our day ahead program. It allows 20 members to buy and sell power close to the time when 21 electricity is actually consumed; it allows us to find 22 the lowest cost resources across the larger region to meet our power needs, and this could potentially 23 24 reduce our costs. It provides economic benefits to participants because it allows us to dispatch the 25

1	least cost resources. And it gives us full
2	visibility of transmission and generation outages,
3	which allows us to manage congestion better on
4	transmission lines, and this provides reliability.
5	More information about EIM can be found on our website
6	at the link that we have on this slide in case you
7	wanted to look up some additional information. Our
8	website has quite a bit more detail on EIM and why
9	WAPA's participating in the energy imbalance market.
10	Next slide.
11	For this portion of the presentation we
12	are going to share information with you regarding the
13	EIM implementation and ongoing costs. Next slide,
14	please.
15	To begin the discussion on EIM
16	implementation ongoing costs, we will start with
17	describing the implementation on ongoing costs that
18	WAPA will receive from the Balancing Authority of
19	Northern California, or BANC, as we call them. BANC
20	is considered the EIM entity, and WAPA is an EIM
21	participating entity under BANC. So, BANC has had two
22	phases for implementing EIM. For phase 1, SMUD joined
23	EIM back on April 3, 2019 and paid for all the costs
24	related to implementing EIM at that time.
25	For phase 2, which will be implemented

1	on March 25th, WAPA made the decision to join EIM
2	along with three other entities: City of Redding,
3	Roseville Electric Utility and Modesto Irrigation
4	District. Since SMUD paid all of the EIM
5	implementation costs for phase 1, and the phase 2 EIM
6	participants will be using some of those systems that
7	were initially paid for by SMUD, WAPA as well as the
8	other three participating entities are responsible for
9	sharing in some of those phase 1 implementation costs.
10	In addition to implementation costs, BANC will also
11	have annual ongoing costs associated with
12	participating in EIM that all participating entities
13	will end up sharing and paying. Next slide.
14	On this slide we share the different
15	type of implementation and ongoing costs that WAPA
16	will be allocated by BANC. There will be
17	implementation or startup costs such as SMUD support.
18	So, SMUD manages the EIM for BANC, so there are costs
19	associated with that support. There's OATI software
20	upgrade to integrate WAPA into the BANC EIM entity
21	scope. Settlement software upgrade, to integrate
22	WAPA into BANC's EIM scope. Utility project
23	oversight. We have a project manager on site to
24	provide project support and coordination to us.
25	CAISO fees, which include uplift and load-related

1 charges. Legal support provided to BANC. And then 2 phase 1 reimbursement. This is WAPA's share of cost incurred 3 4 during phase 1 for creation of the EIM entity. As I 5 mentioned on the previous slide, SMUD was the first 6 entity to into EIM and paid all the cost to develop the EIM entity. So, those of us entering EIM as part 8 of phase 2 were responsible for a share of those phase 9 1 costs. 10 Then we have ongoing or reoccurring 11 costs, such as WEIM operation costs, this is for 12 staffing and software support for EIM operations. 13 then we have stakeholder support costs for engagement in the EIM stakeholder process. And then, similar to 14 15 what we saw for implementation cost, we'll have 16 ongoing costs for CAISO fees, which could be like 17 uplift charges and load-related charges. And then, of 18 course, legal support that's provided to BANC. slide. 19 20 Now we want to talk a little bit about 21 the methodology that BANC will use to allocate costs EIM participants. BANC has approved a cost 22 allocation methodology to allocate EIM implementation 23 24 and ongoing costs based on a participating entity's three-year rolling average of their net energy load 25

1 percentage, or NEL percent, as we call it. This 2 methodology is used to mitigate for any significant changes in hydrology from year to year. 3 To memorialize the use of this 4 5 methodology there is a proposal to revise the BANC EIM 6 participating agreement that participant, including WAPA, has signed. For BANC's allocation of 8 implementation cost for phase 2, WAPA is one of four 9 participating entities, as described in the previous slide. 10 11 There's City of Roseville -- I'm sorry, 12 City of Redding, Roseville Electric Utility, Modesto 13 ID, and WAPA. And all four will share and pay the 14 cost for phase 2 implementation. WAPA's net energy 15 load percentage for allocating implementation cost is 16 24.1 percent, and this is based on a three-year 17 rolling average of information from 2017, 2018 and 2019. For the allocation of ongoing costs, WAPA is 18 19 one of five participating entities because now we're 20 adding in SMUD, who is also an EIM participant under BANC. And all five entities will share in paying the 2.1 22 ongoing cost for EIM. WAPA's NEL percent for allocating ongoing cost is 8.6 percent. Again, this 23 24 is based on a three-year rolling average of WAPA's NEL percent. The only difference in the net energy 25

1	load percent calculation for allocating
2	implementation cost and ongoing cost is whether
3	SMUD's net energy load is included as a basis for
4	allocating cost. Next slide, please.
5	WAPA's net energy load percent for
6	allocating BANC charges includes the following
7	loads for the following entities, which are Lawrence
8	Livermore National Lab, Tracy Pump Load, Trinity
9	Public Utility District, the Balancing Authority
10	Losses and Station Service, East Contra Costa
11	Irrigation District, Contra Costa Water District,
12	Byron-Bethany Irrigation District and San Juan Water
13	District. Next slide.
14	To get into the more specific details
15	on BANC's annual estimated implementation cost we want
16	to share this slide with you that shows the
17	implementation cost incurred for 2019 and then what is
18	estimated for 2020 and 2021. We have a total
L9	cumulative cost of about 1.3 million. And then for
20	2019 we incurred cost of a little over well, it's
	2019 we incurred cost of a little over well, it's about 474,000. And then estimated costs for 2020 are
21	
21 22	about 474,000. And then estimated costs for 2020 are
20 21 22 23 24	about 474,000. And then estimated costs for 2020 are about 597,000. And then, as we can see, in 2021,
21 22 23	about 474,000. And then estimated costs for 2020 are about 597,000. And then, as we can see, in 2021, implementation costs start to taper off because we are

1	of cost that's reflected in this table is WAPA's
2	allocated share of the implementation cost using our
3	net energy load percent of 24.1 percent. And the
4	repayment of implementation costs are spread over
5	three years, as we can see in the table. So, we
6	already incurred the cost for 2019, and then, course,
7	2020 and 2021 are estimates. Next slide, please. To
8	get into more specific details on BANC's annual
9	estimated ongoing cost, this slide shows that the
10	total estimated cost will be, approximately, 377,000
11	per year. What's shown here is WAPA's allocated share
12	using our net energy load percent of 8.6 percent. So,
13	as previously mentioned, for ongoing costs, we
14	anticipate they will begin in March of 2021 when we
15	go live in the EIM market. Next slide, please.
16	In the previous slide we talked about
17	BANC's implementation and ongoing cost, and now we
18	want to share with you the EIM implementation ongoing
19	cost information for WAPA. The only costs we
20	anticipated incurring are for software-based costs.
21	We have total implementation costs that were \$545,500.
22	Those costs were actually incurred in fiscal year
23	2019. And then there are also estimated ongoing costs
24	for about \$184,400 per year. And, again, these are
25	related to software-type costs. And these costs will

1 start to incur in 2021 after we go live in EIM. 2 slide, please. 3 In addition to BANC and WAPA, Reclamation also has EIM implementation cost. 4 5 Reclamation needs to change their Central Valley 6 automated control system, primarily for software, to accommodate real time dispatch signals for EIM. 8 current plan is to create virtual units for each EIM 9 aggregation area and the adaptation of the existing automatic schedule and AGC dispatch functions in order 10 11 to integrate with the new EIM signals. The full scope 12 of changes aren't known yet until decisions on 13 aggregation are made. 14 For now, placeholder funding of about 15 \$500,000 per year for the CVACS-EIM changes are 16 included in fiscal year 2020 and fiscal year 2021, 17 and these placeholders have been approved by the Technical Committee to support this project. 18 These are one-time costs and Reclamation does not 19 20 anticipate to have any reoccurring ongoing costs related to EIM. Next slide. 2.1 22 To wrap up this section of the presentation we wanted to bring all of the 23 2.4 implementation and ongoing costs together for BANC, WAPA and Reclamation to show the total estimated EIM 25

1 cost per year. So, that's what we're trying to 2 display in this table here. In the table, the first two rows are for BANC. So, we show BANC EIM 3 implementation costs and then BANC ongoing costs. 4 The 5 next two rows are WAPA's cost for implementation and 6 ongoing costs. And then we have Reclamation's implementation cost. You can see for 2019, total 8 costs were about a little over a million dollars. The 9 estimate for 2020 is, again, a little bit over a million dollars. 10 11 And then 2021, the estimate increases a 12 little bit to about 1.3 million. But then starting in 13 2022, that's when we're done with paying the 14 implementation cost and we're only paying the ongoing 15 reoccurring EIM cost. So the total cost will be 16 reduced down to about half a million or so per year 17 going out into the future for EIM. 18 To give you an idea of the fiscal 19 impact of WAPA's participation in EIM, we added a 20 section toward the bottom of the table that shows how 2.1 much of WAPA's O&M is anticipated to increase each 22 year to (inaudible) participate in EIM. So, we can 23 see that in 2019, the increase to WAPA's annual O&M 2.4 little under a 1 percent increase. And for

2020, we anticipate there to be about 1 percent

25

Т	Increase for Owm. And then in 2021, we do see a
2	slight increase to our O&M, a little bit over 1
3	percent and that's because we're going to start
4	seeing the ongoing costs coming onboard. We're going
5	to see the implementation costs taper off and then
6	ongoing costs come on.
7	In this table we reflect a full year of
8	implementation costs for 2021 but actually it's going
9	to be half because we're only going to have six months
10	for that fiscal year where we're actually
11	participating in the EIM market. So, that 1 percent
12	increase in O&M is going to be a little bit less
13	because we won't have a full year of implementation
14	cost in 2021.
15	And then in 2022, where we're only
16	looking at ongoing costs for EIM, we see that the
17	impact to O&M is less than half a percent for each
18	year going out into the future. And then at the very
19	bottom of the table we show the fiscal impact of EIM
20	on the annual power revenue requirement that is paid
21	by our first preference and base resource customers.
22	So, we wanted to make sure that we reflect how much
23	our power revenue requirement could potentially
24	increase as a result of our participating in EIM.
25	So, for fiscal years 2019 and 2020, we

1 don't show any impact to the power revenue requirement 2 because we made a commitment to our customers that we 3 would hold EIM-related costs out of the power revenue requirement until we went through this public process 4 5 where we share a proposal for how we intend to 6 allocate EIM costs. 7 So, we made an agreement to not 8 include those costs for those power revenue 9 requirements. So, starting in 2021, that's when we 10 start incorporating proposed EIM implementation costs 11 and proposed ongoing costs. So, you can see that 12 there is an increase projected for the power revenue 13 requirement of about 1.85 percent, and this increase 14 has a lot to do with the implementation cost from 15 previous years that did not go to the PRR. 16 now being included in 2021 because we anticipate being 17 done with this public EIM process. 18 So, those prior year costs are now 19 included in 2021 so that reflects more than just one 20 year of EIM implementation cost in that increased 21 percentage. 22 And then in 2022, implementation costs are done and we're only looking at ongoing cost. 23 24 so, the increase in the power revenue requirement is a little bit more than half a percent going out into 25

Τ	future years. Right around ./4 percent.
2	And I just want to point out that this
3	table only reflects administrative type costs, not EIM
4	load charges or any potential benefits that WAPA may
5	receive from participating in the energy imbalance
6	market. So, we'll learn more about load costs and EIM
7	benefits in other portions of today's presentation,
8	but I just wanted to make sure it's understood that
9	this impact to O&M and the impact to the power revenue
L O	requirement is only showing a cost piece for
L1	administrative charges. It does not include load-
L2	based costs or any benefits we might see from
L3	participating in EIM.
L 4	So, this brings us to the end of this
L 5	portion of the presentation, and so I would like to
L6	turn it back over to Koji to see if there are any
L7	questions from anybody that's participating today.
L8	KOJI KAWAMURA: Thank you, Autumn. At
L9	this point in time, I'm going to go on ahead and if
20	you have any questions, either you can throw them in
21	the chat or you can raise your hand. I don't see any
22	questions in the chat, and so, Tony, do you see any
23	raised hands?
24	TONY HENRIQUEZ: No, I don't see I
25	have a feedback column and I don't see any raised
	Page 25

1 hands there, and I have not received any texts. 2 KOJI KAWAMURA: Okay. All right, so at 3 this point I am going to go on ahead and briefly open up the phone lines in case anyone has a question they 4 5 want to ask. So, if the questions don't work well on the phone line and there's too much static, you know, 6 we'll go line by line if we have to. But, really, if 8 you can either put your questions in the chat or raise 9 your hand at this point in time -- Tony, go on ahead 10 and open up the phone lines to see if anyone has any 11 questions. 12 TONY HENRIQUEZ: Okay. So, prior to me 13 opening up the phone lines, I'm going to let you know that I did receive a text from Jim Shetler and he 14 15 would like to ask for some clarifications. So, I'm 16 going to go ahead and unmute Jim Shetler right now. 17 Go ahead, Jim. 18 JIM SHETLER: Good morning. It's Jim Shetler with BANC. I did want to offer a slight 19 20 clarification. On the ongoing costs for EIM, the 21 annual costs, the \$376, there's an updated budget that is in the process of being discussed within BANC And 22 will be improved later this year. It actually lowers 23 WAPA's share a little bit. 24 25 But the \$300 range is for the nine Page 26

1	months of 2021. So, when you start talking annually
2	thereafter, then that would be increased by another
3	25 percent or so. So, it's probably somewhere in the
4	\$400-\$450 range. I just wanted to make sure that you
5	were aware of that.
6	KOJI KAWAMURA: Thank you, Jim.
7	AUTUMN WOLFE: Yes, thank you for
8	providing that clarification. That's very helpful.
9	And I'm going to make sure I update my notes and make
10	sure I update that particular side. Thank you very
11	much.
12	KOJI KAWAMURA: All right, so, Tony, do
13	we have any other questions?
14	TONY HENRIQUEZ: Yes, we do. But did
15	you want me to go ahead and go to the phones first
16	since we offered that?
17	KOJI KAWAMURA: Yeah, that's fine.
18	TONY HENRIQUEZ: Okay. Right now I'm
19	going to go ahead and unmute 530-209. And I think
20	530-209, did you have any questions?
21	BRIAN SCHINSTOCK: I do not, no.
22	TONY HENRIQUEZ: And will you remind
23	me again what your name is? I apologize. Then that
24	way I can make sure I'm not addressing you by a phone
25	number.

1	BRIAN SCHINSTOCK: Yeah, no problem.
2	Brian Schinstock.
3	TONY HENRIQUEZ: Thank you, Brian.
4	Okay, and then I've got 530-941. I've unmuted you.
5	If you're call-in user number 14 excuse me, number
6	5, phone 530-941, you are unmuted, in case you're
7	muted on your end. Did you have any questions? Okay.
8	And then I don't see our third phone
9	number in here. They might've dropped off or changed
10	their process. So, we do have one other question from
11	Mr. David Tromblee. I'm going to go ahead and unmute
12	him. Interesting, it's not letting me unmute him.
13	Okay. Go ahead, David, now I see you're unmuted.
14	DAVID TROMBLEE: Thank you. I was just
15	wondering if the idea of implementing EIM sounded like
16	it was having to do with savings, potential savings,
17	but it only seems to show in this chart that there's
18	just an increase in the power revenue requirement.
19	I'm just wondering if there are savings, where would
20	those be accounted for, and would we expect savings or
21	just costs?
22	AUTUMN WOLFE: That's a very good
23	question. Thank you for asking that. So, yes, we do
24	anticipate that there will be benefits from our
25	participating in the energy imbalance market. And

1 while we are proposing that the costs related to 2 implementation of EIM and then ongoing costs for participating in EIM will go to the power revenue 3 requirement, any benefits from us participating in the 4 5 energy imbalance market will also flow through to the 6 power revenue requirement. And it's our hope that the benefits we see from participating will offset the 8 costs of implementation and ongoing cost. That's what 9 we're hoping for. Later on in the presentation, we will 10 11

share a little bit more information on the benefits of our participating in EIM so that you get a better idea of how much those benefits might look like that are going to potentially be applied to the power revenue requirement, and that will hopefully offset any EIM implementation and ongoing costs. So, more to come. Thank you.

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DAVID TROMBLEE: Thank you.

KOJI KAWAMURA: Okay. And then I have a question from Randy Howard. And I see that Mr. Dave Oliveras also has his hand raised. So, I will come to you here shortly, Dave. Let me go ahead and get Mr. Randy Howard with his question as well. Go ahead, Randy. Randy, in case you're muted on your end, I can't hear you.

1	RANDY HOWARD: I was muted. I'm sorry.
2	He's barking away. Thank you for the opportunity. Is
3	WAPA planning on hiring any additional staff or hear
4	of Reclamation hiring any additional staff to
5	support the implementation for the ongoing operation
6	regarding the EIM?
7	AUTUMN WOLFE: So, thank you for that
8	question. No, we are not anticipating hiring any
9	additional staff for the implementation of EIM and
10	then for the ongoing the ongoing activities related
11	to EIM. Those activities are going to be absorbed
12	with the duties for existing staff that we already
13	have. We don't anticipate hiring anybody additional.
14	And that's my understanding for Reclamation as well.
15	They intend to absorb the EIM duties as
16	part of their existing staff. They're just being
17	added to all the activities we currently are working
18	on. So, no additional labor charges related to EIM.
19	We will just absorb it with our current labor staff.
20	RANDY HOWARD: And so are you then
21	shifting some of the cost structure of your existing
22	staff so they'll charge to EIM implementation and
23	ongoing costs?
24	AUTUMN WOLFE: So, what will happen is
25	right now, labor cost for our existing staff is
	Page 30

1 charged as annual O&M on our power revenue 2 requirement. And so any labor charges associated with EIM that the staff provides support for, their labor 3 will still continue to be charged to the annual power 4 5 revenue requirement and it will still show in the annual O&M for WAPA. So, they may be working on EIM 6 instead of other activities but it will still reflect 8 as a labor cost within the annual O&M for WAPA. 9 that make sense? RANDY HOWARD: Well, my concern with 10 11 how you just responded is, you know, we won't have a 12 breakout understanding of the labor cost structure 13 regarding EIM implementation and ongoing costs. when you get to the benefit side of -- you know, how 14 15 benefits are allocated and shared, we don't know --16 you know, if everybody is paying in because we all 17 take our share of the ongoing labor costs, I don't know that it's going to be the proper distribution or 18 allocation of the benefits. 19 20 So, I would like for at least WAPA to 2.1 consider a separate charge code for those that are 22 completely labor costs so we can really just 23 understand what is this costing? And then when you 2.4 get to the benefit side on the allocation of those

Page 31

benefits, we can have a better understanding there.

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1	AUTUMN WOLFE: Sure. Absolutely. So,
2	just so you know, we have developed separate labor
3	codes for when we do work on EIM and so we can provide
4	that detailed information. And we know for after the
5	first couple of years of implementation that it would
6	be of interest to our customers to share that detailed
7	level of information.
8	And so it was our intention that at
9	future customer meetings, that we would give a
10	breakdown of what EIM labor charges were for the year
11	and, you know, whatever EIM-related costs were
12	incurred. And then, of course, share what benefits we
13	saw from participating in the EIM, and then just
14	provide a net calculation. Was it a net cost for the
15	year, or was there a net overall benefit for the year?
16	So, we anticipate that that would be
17	something our customers would be interested in, so
18	we're going to make sure that we have reporting
19	through our software system that will allow us to pull
20	costs at that level of detail so we can share that
21	information with customers at future customer
22	meetings.
23	RANDY HOWARD: Thank you, Autumn.
24	That's perfect.
25	AUTUMN WOLFE: Sure, no problem. And
	Page 32

1	thank you for the question.
2	TONY HENRIQUEZ: So, next one up, I
3	have Mr. Dave Oliveras. I'm going to go ahead and
4	unmute you now. Go ahead, Dave.
5	DAVE OLIVERAS: Okay. Can you hear me,
6	Tony?
7	TONY HENRIQUEZ: I can.
8	DAVE OLIVERAS: All right, great.
9	Autumn, thank you so much for walking us through all
10	of this information. I just had one quick question
11	just I'm trying to figure out if there's a
12	distinction here. I thought I heard you say that the
13	ongoing implementation and ongoing cost wouldn't be
14	charged until after the proceeding was completed. But
15	I'm trying to figure out here if it's a 2021 estimate,
16	does that mean it's going to be included in the PRR
17	starting October 1st? Maybe that's I just wanted a
18	little clarification on that.
19	AUTUMN WOLFE: Yes, sure, no problem.
20	So, yes. So, the implementation costs that would have
21	hit in 2020, those will be included in the 2021 power
22	revenue requirement. They're already included in the
23	forecast that we have posted on our website, and so
24	they are reflected in the total O&M annual O&M for
25	WAPA.

1	DAVE OLIVERAS: Okay, so they are going
2	to come in this fall and then we're going to give
3	us through next September?
4	AUTUMN WOLFE: That's right. And we
5	anticipate and we anticipate that the increase to
6	the power revenue requirement will be about 1.85
7	percent.
8	DAVE OLIVERAS: Okay, thank you. I
9	just wanted to make sure there was that distinction.
10	Thank you very much. Appreciate it.
11	AUTUMN WOLFE: Sure, no problem. Thank
12	you.
13	TONY HENRIQUEZ: Okay, so the next
14	question I have is from Willie Manuel. I'm going to
15	go ahead and unmute you right now, Willie, and you're
16	unmuted.
17	WILLIE MANUEL: So, thank you. Good
18	morning. And thank you, Autumn, for going through
19	this presentation. I just had a couple questions.
20	The first one I think earlier in the slides it was
21	said that, you know, implementation costs were going
22	to be paid by the participants. But then in here, in
23	this slide 20 here, it seems like the implementation
24	and ongoing costs are going to be included in our
25	revenue requirements, which is paid by all I guess,

1	preference customers. So, can you clarify that a
2	little bit?
3	AUTUMN WOLFE: Sure, sure. That's a
4	good question, actually. So, when I say all EIM
5	participants will pay for EIM ongoing costs, I'm
6	talking about participating entities. At the
7	beginning of this portion of the presentation, I
8	explained that BANC is the EIM entity, and then WAPA,
9	SMUD, Roseville, Redding and MID are all participants
10	participating in EIM under BANC, as the EIM entity.
11	So, all of those participating
12	entities, including WAPA, will share in paying the
13	ongoing costs. So, for WAPA's share of those ongoing
14	costs, what we do is we sub-allocate those costs for
15	repayment, and so those costs are sub-allocated to our
16	power revenue requirement, which will be paid by our
17	first preference and our base resource customers. And
18	the next portion of the presentation gets a little bit
19	more into those details for how those costs are going
20	to be allocated.
21	But one thing I want to make sure is
22	clear is that we spent a lot of time talking about
23	how charges are going to be allocated to the power
24	revenue requirement but I want to make sure that it's
25	clear that any benefits WAPA receives from
	Page 35

Τ	participating in the EIM will also go to the power
2	revenue requirement. And so we get into more detail
3	later in the presentation that explains what those
4	EIM benefits might look like. And, again, it's our
5	hope that the benefits from participating in EIM will
6	be more than enough to offset any charges that we see
7	for EIM implementation and ongoing cost. So, that's
8	the goal.
9	WILLIE MANUEL: Thank you. I've got a
10	follow-up question that's related to that hope, I
11	guess. So, you know, you mentioned that the hope is
12	that the benefits will be greater than the costs. How
13	often and you might have answered this earlier
14	how often would WAPA look at you know, compare the
15	costs against the benefits? And then if the costs are
16	greater than the benefits, you know, how long before -
17	- will WAPA consider stopping participation with the
18	EIM if the benefits are not don't cover the costs?
19	AUTUMN WOLFE: So, there are many
20	reasons why we are participating in EIM. One of them
21	is, hopefully, cost savings but it's also so that we
22	have trading partners among other there's other
23	reasons as well. There are both fiscally beneficial
24	and intangible benefits from our participating.
25	And so until we actually participate in

1	the market, we can't say for sure what our load-based
2	charges are going to look like. We can't say for sure
3	what our what benefits we might receive for
4	participating in the market.
5	So, when I say we hope the benefits
6	will more than cover the cost of EIM implementation
7	and ongoing cost, it's because we really we don't
8	really know what we're going to see until we're
9	actually participating. So, we don't want to say
10	that for sure this is going to happen when we just,
11	frankly, don't know.
12	And, as you know, with any time you
13	start something new, you know, it might take a while
14	to find your feet when participating in the market.
15	And so we may not see a net benefit in the first year
16	or the second year, you know, but we're hoping we
17	will. But it might take time to refine how we
18	participate where we can start seeing benefits that
19	are greater than cost.
20	So, to get back to the other question
21	you had mentioned, how often would we share this
22	information, this kind of goes back to the question
23	that Randy Howard was asking. We understand that our
24	customers will find this information very interesting.
25	You guys are going to want us to be

1	very transparent with EIM costs and benefits,
2	especially for the first couple of years, and we
3	anticipate that at future customer meetings, that
4	this is the type of information that we would share.
5	We would share the EIM labor costs, ongoing costs,
6	administrative costs, load-based costs, and then we
7	would share what benefits we realize from
8	participating.
9	And then we would do the calculation
10	to show you whether there was a net benefit for the
11	fiscal year or if there was a net cost. So, we
12	intend to be fully transparent in how participating
13	in EIM looks for WAPA, and so we definitely plan on
14	doing that in the future.
15	WILLIE MANUEL: Thank you.
16	AUTUMN WOLFE: Sure.
17	TONY HENRIQUEZ: Okay. So, I'm
18	scrolling through our attendee list and I don't see
19	any raised hands. Oh, hang on, I have one from Ms.
20	Regina Rieger. Let me go ahead and unmute you,
21	Regina. Go ahead, Regina.
22	REGINA RIEGER: Thank you. Thank you
23	for your presentation today, Autumn. Very helpful.
24	Back on slide 14 you referenced that the ongoing and
25	implementation costs are measured now on a three-year

1	rolling average of net energy load percentage, which
2	is, I think, a good change from what was originally
3	proposed to use in 2017 as a basis.
4	Just a point of clarification. Is that
5	an ongoing rolling three-year average for the
6	prospective cost?
7	AUTUMN WOLFE: Yes. This is a three-
8	year rolling average going forward.
9	REGINA RIEGER: Thank you.
10	AUTUMN WOLFE: You're welcome.
11	TONY HENRIQUEZ: Okay, again, scrolling
12	through, I don't see any other feedback other than Ms.
13	Rieger. If you don't have any other questions, please
14	go ahead and un-flag your raised hand, otherwise I can
15	go ahead and unmute you again. Okay, good, thank you.
16	I don't see any other raised hands and I don't have
17	any other texts in my box for chat.
18	KOJI KAWAMURA: Okay, thank you, Tony.
19	So, with that, let's go on ahead and move to the next
20	presentation.
21	AUTUMN WOLFE: Great. Thank you, Koji.
22	So, for this portion of the presentation we get into
23	the details for how we're going to allocate EIM
24	charges. Next slide, please.
25	Okay, so this first slide shows a

1	flowchart that gives an overview of how EIM charges
2	will be allocated. For this portion of the
3	presentation, we'll break down this flowchart into
4	smaller pieces and share the details for how
5	implementation and ongoing charges will be allocated.
6	Next slide, please.
7	First, we'll start with the allocation
8	of EIM implementation costs. As we talked about in
9	the first section of this presentation, there are
10	implementation costs required for participating in EIM
11	for BANC and WAPA and Reclamation. The current
12	proposal is for the EIM implementation costs to flow
13	through to the power of revenue requirement for
14	payment.
15	This proposal is based on the
16	understanding that any benefits from WAPA
17	participating in EIM will also flow through to our
18	power revenue requirement. And as I mentioned
19	previously, our hope is that benefits will exceed the
20	participating and ongoing I'm sorrythe
21	implementation and the ongoing cost for EIM. Next
22	slide, please.
23	So, this slide shows how EIM
24	implementation costs will flow through to the power
25	revenue requirement. Reclamation's implementation

	COSCS WIII COME TO WAPA and then we will also have
2	WAPA's implementation costs, and then WAPA's share of
3	BANC's implementation costs that are all allocated to
4	the power revenue requirement.
5	So, in this flowchart we see
6	Reclamation's implementation costs of about a million
7	dollars, it'll come to WAPA. And then we have WAPA's
8	implementation costs of \$545,500. And then we have
9	WAPA's share of BANC's implementation cost. This is
10	based on our NEL percent of 24.1 percent, and the
11	total anticipated implementation costs are right about
12	\$1.3 million. So, those costs will go to the power
13	revenue requirement, which is paid by our first
14	preference and base resource customers. Next slide.
15	And now for the rest of this portion of
16	the presentation we're going to focus on the
17	allocation of ongoing charges. As we talked about,
18	there will be ongoing EIM charges for BANC and WAPA
19	while participating in EIM. The proposed process for
20	allocating ongoing EIM charges depends on whether the
21	charges are for conforming or nonconforming loads.
22	For conforming loads, the proposal is
23	to allocate WAPA's share of EIM charges to
24	transmission customers who are subject to WAPA's
25	tariff, including WAPA Merchant, based on load ratio
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1 share percentages. Also for conforming loads, there 2 is a tier 1 and a tier 2 allocation for allocating 3 charges. For nonconforming loads, the proposal 4 5 is to directly allocate EIM charges to the customer 6 with the nonconforming load. Also, we would like to share that for EIM charges related to project use, 8 WAPA has a statutory obligation to provide generation 9 to project use customers first. Therefore, under this current proposal, load costs for project use customers 10 11 will be allocated to the power revenue requirement for 12 payment. Next slide, please. 13 As I mentioned on the previous slide, for the allocation of ongoing costs, the process used 14 15 for allocating the costs depends on whether the load 16 is for a conforming load or a nonconforming load. 17 Conforming loads are usually associated with a weather-based element, which is somewhat 18 predictable based on the given conditions. And for 19 20 conforming loads, for entities within WAPA's subbalancing authority, those loads will be submitted to 21 22 CAISO by BANC using BANC's scheduling coordinator ID. So, WAPA will provide the load information to BANC, 23 who will then submit the information to CAISO on our 2.4

which

behalf. Then there are the nonconforming loads

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1	are loads that change and are abnormally different
2	than the normal load patterns, such as a factory that
3	has high energy demands at different times throughout
4	the day. For nonconforming loads within WAPA's sub-
5	balancing authority, those loads will be submitted to
6	CAISO directly by WAPA using our own scheduling
7	coordinator ID. Next slide, please.
8	I mentioned previously that for
9	conforming loads there is a tier 1 and a tier 2
10	allocation of EIM charges. A tier 1 allocation is the
11	allocation of WAPA's share of CAISO and BANC charges
12	to WAPA's transmission customers that are subject to
13	our tariff, including WAPA Merchant.
14	For the tier 1 allocation of EIM
15	charges, new EIM rates schedules are required and they
16	only apply to WAPA's transmission customers that are
17	subject to our tariff, including WAPA Merchant. WAPA
18	Merchant is considered a transmission customer. Then
19	there's the tier 2 allocation, which is the sub-
20	allocation of CAISO and BANC charges from WAPA
21	Merchant to the annual power revenue requirement,
22	which is, as I mentioned previously which is paid
23	by our first preference and our base resource
24	customers. Next slide, please.
25	Now I'd like to walk you through the
	Page 43

portion of the overall flowchart that we saw at the beginning that shows the process for allocating charges for conforming loads. This specific portion of the flow chart focuses on the tier 1 allocation for conforming loads.

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So, as I mentioned for conforming loads, EIM charges flow through BANC. Charges are first allocated from CAISO to BANC, and then BANC allocates the EIM charges among its EIM participating entities based on their net energy load percent. In this flowchart, WAPA is on the left hand side in the green box. WAPA is the transmission provider. And on the left, the kind of blurry green box on the left, and that box represents the other participating EIM entities under BANC. So, that box represents Roseville, Redding, MID and SMUD.

For the EIM charges allocated to WAPA, they are then allocated to WAPA Merchant and WAPA's transmission customers. This is considered the tier 1 allocation. And this tier 1 allocation is where the new proposed EIM rate schedules apply. Later in today's presentation I will share more detailed information on the new proposed EIM rate schedules and then walk you through an example of when the rate schedule applies and how a charge will flow through

from CAISO all the way through to the power revenue requirement. Next slide, please.

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Now I'd like to walk you through the tier 2 allocation for conforming loads. The tier 2 allocation is the sub-allocation of charges that are assigned to WAPA Merchant. For this portion of the flowchart, we explain why we are proposing that load charges for customers within our sub-balancing authority are to be allocated to WAPA Merchant and then to the power revenue requirement. The load-based charges that are allocated to WAPA Merchant in the tier 1 allocation are charges for loads within WAPA's sub-balancing authority.

allocation, the first blue box on the bottom left identifies customers within WAPA's footprint. And any of these customers could incur EIM load-based charges. Two customers within our footprint have load greater than one megawatt. Three customers have load less than one megawatt. Four customers fall within our footprint but are actually within SMUD's subbalancing authority. So, SMUD will be allocated their EIM-based charges, not WAPA. And then there are two customers that have project use.

For the two customers with load greater

1 than 1 megawatt, we don't believe that we will get 2 load detail at a granular enough level to identify which load charges belong to which customer because 3 these loads are so small. For the three customers 4 5 with loads less than 1 megawatt, these loads aren't 6 tagged because they don't meet the 1 megawatt threshold for tagging loads. So we don't believe that 8 we will be able to identify which load charges belong 9 to which customer. And then, of course, there are the 10 two project use customers that we have a statutory to 11 serve their needs first. 12 So, with not having charge information 13 at a granular enough level for customers within our 14

So, with not having charge information at a granular enough level for customers within our sub-balancing authority, we're proposing that EIM load charges and any potential benefits -- we propose that they all get allocated to the power revenue requirement for payment.

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In the second blue box on the bottom of this flowchart, this second box represents Trinity

Public Utility District, who is a first preference customer with load within our sub-balancing authority.

BANC and Trinity have developed an agreement that they will pay specific load-based charges for Trinity, and a portion of Trinity's charges will also go to the power revenue requirement. We plan to share more

1 information on the allocation of Trinity EIM charges 2 in a later portion of the presentation. So, more will come on that allocation. 3 And then the third blue box on the 4 5 bottom of this flowchart represents administrative 6 type charges that were described in the first portion of the presentation. And this is just showing how 8 those charges are also anticipated to flow through to 9 the power revenue requirement. Next slide, please. Now I'd like to walk you through the 10 11 allocation of charges for nonconforming loads. 12 Earlier I mentioned that for nonconforming loads, WAPA 13 will submit information for these loads directly to CAISO using our own scheduling coordinator ID, and 14 charges will flow through to WAPA directly from CAISO. 15 16 So, they will not flow through BANC, like we talked 17 about for conforming loads. The proposal is that WAPA will direct 18 bill customers with nonconforming loads and the 19 20 charges for project use will -- and the charges for project use for nonconforming loads will flow through 21 22 to our power revenue requirement, as shown here in the 23 flowchart. Next slide, please. Now we're going to 2.4 talk about charges related to WAPA's participation in the EIM market. Our current proposal is that both 25

the charges and benefits will flow through to the power revenue requirement. And as I mentioned earlier in response to a question that was asked, at this time it's really hard for us to say what the charges and benefits might look like for our participation in the market. We'll know more once we start participating.

We anticipate that we would see revenue from dispatch benefits and charges related to

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revenue from dispatch benefits and charges related to generation deviation. Later in the presentation we share more information on what potential EIM benefits might look like. And, again, as we said a couple times throughout the presentation, our hope is that the benefits will offset the cost of our participating in EIM. Next slide, please.

So, on the previous slides we shared the allocation of BANC's ongoing charges, and on this slide we're sharing the ongoing costs related to WAPA's participation in EIM. These are all annual software-related costs that were described in the first portion of the presentation. And as you can see from this flowchart, we are proposing that the software-type costs are allocated to the power revenue requirement. And we will start seeing these costs in the power revenue requirement in 2021 after we start

1	participating in EIM. Next slide, please.
2	So, now we're going to bring all the
3	pieces of the overall charge allocation flowchart back
4	together. We talked about a proposal for the
5	allocation of charges for conforming loads, including
6	the tier 1 and tier 2 allocation of charges, which is
7	represented here in the red circle. Next slide.
8	We talked about the proposal for the
9	allocation of charges for nonconforming loads, which
0	is represented here in the red circle. Next slide.
1	And we talked about the proposal for
2	allocating charges and benefits related to our
. 3	participation in the EIM market. Next slide.
4	And, last, we talked about our proposal
. 5	for allocating WAPA's ongoing EIM charges. So, this
6	concludes the charge allocation portion of the
-7	presentation. The next portion of the presentation we
8 -	will share more detailed information about the
9	specific CAISO charges that we could see for
20	conforming and nonconforming loads. But before we
21	move on to that portion of the presentation I'd like
22	to pause here and turn it back over to Koji to see if
23	there are any questions for this charge allocation
24	portion of the presentation.
25	KOJI KAWAMURA: Thank you, Autumn. At
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1	this point in time, Tony, do we have any questions? I
2	don't see any questions in the chat. Do we have any
3	other questions or raised hands?
4	TONY HENRIQUEZ: I'm scrolling through
5	the attendee list and I don't see any raised hands as
6	of yet. And, like you said, I don't see Oh, I do
7	have a question from Mr. Willie Manuel. I'm going to
8	go ahead and unmute you. Go ahead, Mr. Manuel.
9	WILLIE MANUEL: Thank you. Autumn, in
LO	some of the areas, you know, you mentioned when you
L1	were (sound drops) conforming and nonconforming loads,
L2	it seems like you mentioned those are within WAPA sub
L3	BA footprint. Now, TID is their own balancing area
L4	and we're not in the WAPA (inaudible) footprint.
L5	Where do we fit in in these charts, I guess?
L6	AUTUMN WOLFE: That's a good question.
L7	So, where you fit in is you are a customer who pays
L8	the power revenue requirement. So, customers who pay
L9	the power revenue requirement are indirectly impacted
20	by implementation costs for EIM and for EIM ongoing
21	costs. So, the new proposed EIM rate schedules apply
22	to the tier 1 allocation, which is specific to WAPA's
23	transmission customers, who are subject to our tariff,
24	and then also WAPA Merchant.
25	But as a customer of WAPA Merchant, TID
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will be paying load-based charges and administrative

EIM charges that flow through from WAPA Merchant to
the power revenue requirement. And you'll also share
in the benefits that flow through from WAPA Merchant
to the power revenue requirement as well.

So, we talked a little bit about how

WAPA will participate. We could see dispatch benefits and, of course, there might be generation deviation charges as well. Those flow through the power revenue requirement. And so that's how TID would be impacted, as a customer paying the power revenue requirement -- you'll see those costs flow through.

But, as we mentioned, in future customer meetings we intend to be very transparent and share the total EIM cost that we have incurred on an annual basis and share the total EIM benefits that we've realized, and then share what that impact is to customers that pay our power revenue requirement. We would want to make sure that we're clear as to how everybody is impacted. But to specifically answer your question, you are indirectly impacted by the tier 2 allocation, that we allocate to (inaudible) from WAPA Merchant through to the power revenue requirement.

WILLIE MANUEL: So, right now I think

1	we just pay, you know we have a shared base
2	resource, so we pay a percent of the revenue
3	requirement. So, is that going to be the same for
4	this (inaudible) requirement now we just pay our base
5	resource percent share of that?
6	AUTUMN WOLFE: Yes, sir. So, these
7	charges will flow through the power revenue
8	requirement and you will pay your base resource
9	percent share of the power revenue requirement. Go
10	ahead.
11	WILLIE MANUEL: Yeah, so the new rate
12	schedules being proposed, they don't really directly
13	apply to TID. It might apply to the WAPA Merchant, as
14	you said, and then from there, it goes to the brown
15	dots there the PRR, and then that's how we get it?
16	AUTUMN WOLFE: That's correct. That's
17	correct. The new proposed rate schedules apply to
18	WAPA Merchant and transmission customers subject to
19	our tariff. Customers like TID, you're not impacted -
20	- you're indirectly impacted by these EIM charges and
21	benefits as things flow through from WAPA Merchant to
22	the power revenue requirement.
23	WILLIE MANUEL: Do you have an idea how
24	much of the percent of the cost sill go to the under-
25	transmission customers and the WAPA Merchant

1	(inaudible)?
2	AUTUMN WOLFE: That's a good that's
3	a very good question. More to come.
4	WILLIE MANUEL: Oh, okay.
5	AUTUMN WOLFE: No worries. In the next
6	portion of our presentation not the next one, but
7	further on in our presentation, we'll talk a little
8	bit about the valuation of our participating in EIM.
9	But we shared some very high-level estimates of what
10	the ongoing costs administrative-type costs are,
11	and what the potential load-based costs might look
12	like. And then what we what we estimate might be
13	received as a benefit from our participating in the
14	market.
15	So, that calculation is coming up later
16	on and that'll kind of give you an idea of what the
17	net impact might be to the power revenue requirement.
18	WILLIE MANUEL: Thank you.
19	AUTUMN WOLFE: Sure.
20	TONY HENRIQUEZ: Okay, so I do have a
21	couple of raised hands. Let's start with Ms. Lena
22	Perkins. You are now unmuted, Lena.
23	LENA PERKINS: Hi there. Can you hear
24	me?
25	TONY HENRIQUEZ: Yes.
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1	LENA PERKINS: All right. I think most
2	of my questions are going to be addressed later in the
3	presentation so I'll let Autumn go through it.
4	They're similar to some of Willie's. So I should have
5	unraised my hand. And I will hold my question.
6	AUTUMN WOLFE: Thank you, Lena.
7	TONY HENRIQUEZ: Okay. And then our
8	next question is from Ms. Regina Rieger. Go ahead,
9	Regina.
10	REGINA RIEGER: Thank you. Thank you,
11	again, Autumn. And could you refer back to slide 15?
12	There's a list of entities that are listed there
13	where, if I understand your presentation correctly,
14	represents the load in WAPA's BA that is the 8.6
15	percent share of implementation and ongoing costs.
16	AUTUMN WOLFE: That is correct.
17	REGINA RIEGER: Okay. And of those
18	customers there, can you identify what is conforming
19	and nonconforming in the context of the presentation
20	that you just shared?
21	AUTUMN WOLFE: Sure. So, all of the
22	on slide 15, all of these customers that are within
23	WAPA's SBA, sub-balancing authority, are conforming
24	loads with the exception of Lawrence Livermore
25	National Labs. They are considered a nonconforming

1	load. And then and then there are some project use
2	customers like Shasta that are also nonconforming
3	loads.
4	But as far as the non-energy loads that
5	we see on the slide on the screen, it's only Lawrence
6	Livermore Labs that is considered a nonconforming
7	load. Everybody else is considered conforming.
8	REGINA RIEGER: Okay, thank you. And
9	just to follow up then, so, there was a reference to
10	direct charges from the ISO for nonconforming and
11	charges from BANC for conforming. Is there a process
12	in place where those load-based charges will be
13	tracked and identified as part of the overall EIM
14	costs?
14 15	costs? AUTUMN WOLFE: Yes. So, very good
15	AUTUMN WOLFE: Yes. So, very good
15 16	AUTUMN WOLFE: Yes. So, very good question. So, the process for allocating those tier 1
15 16 17	AUTUMN WOLFE: Yes. So, very good question. So, the process for allocating those tier 1 charges that from conforming loads that flow
15 16 17 18	AUTUMN WOLFE: Yes. So, very good question. So, the process for allocating those tier 1 charges that from conforming loads that flow through from CAISO to BANC and then from BANC to WAPA.
15 16 17 18	AUTUMN WOLFE: Yes. So, very good question. So, the process for allocating those tier 1 charges that from conforming loads that flow through from CAISO to BANC and then from BANC to WAPA. That tier 1 allocation is actually documented in
15 16 17 18 19	AUTUMN WOLFE: Yes. So, very good question. So, the process for allocating those tier 1 charges that from conforming loads that flow through from CAISO to BANC and then from BANC to WAPA. That tier 1 allocation is actually documented in business practices. It's business practice 44 that we
15 16 17 18 19 20	AUTUMN WOLFE: Yes. So, very good question. So, the process for allocating those tier 1 charges that from conforming loads that flow through from CAISO to BANC and then from BANC to WAPA. That tier 1 allocation is actually documented in business practices. It's business practice 44 that we posted on Oasis. We had a 30-day comment period where
15 16 17 18 19 20 21	AUTUMN WOLFE: Yes. So, very good question. So, the process for allocating those tier 1 charges that from conforming loads that flow through from CAISO to BANC and then from BANC to WAPA. That tier 1 allocation is actually documented in business practices. It's business practice 44 that we posted on Oasis. We had a 30-day comment period where we shared those business practices with customers.
15 16 17 18 19 20 21 22	AUTUMN WOLFE: Yes. So, very good question. So, the process for allocating those tier 1 charges that from conforming loads that flow through from CAISO to BANC and then from BANC to WAPA. That tier 1 allocation is actually documented in business practices. It's business practice 44 that we posted on Oasis. We had a 30-day comment period where we shared those business practices with customers. And so those have not been finalized yet but that will

1	questions.
2	AUTUMN WOLFE: Thank you.
3	ARUN SETHI: Hi, Autumn. This is
4	(inaudible). Just one point of clarification is that
5	(inaudible) is a nonconforming load and (inaudible) so
6	that includes 30 (inaudible) also as a nonconforming
7	load.
8	AUTUMN WOLFE: Thank you for that
9	clarification. Thank you, (inaudible).
10	TONY HENRIQUEZ: Go ahead, Koji.
11	KOJI KAWAMURA: Are there any other
12	questions in the chat or raised hands? If not, let's
13	go on ahead and open up the phone lines.
14	TONY HENRIQUEZ: I don't have any
15	raised hands or chats right now. I'm going to go
16	ahead and open up the phone lines and I'm going to
17	start with Mr. Brian Schinstock. Do you have any
18	questions, Brian?
19	BRIAN SCHINSTOCK: Am I yeah, I
20	didn't raise my hand. I don't know why it keeps
21	coming up, though.
22	TONY HENRIQUEZ: No, no, you were not
23	raised hand or anything like that, just because I know
24	you don't have the ability to unmute yourself, so we
25	have to go through the process of unmuting the lines,

1	just to make sure that we understand whether or not
2	you have any questions.
3	BRIAN SCHINSTOCK: Oh, gotcha. Thanks.
4	I have no questions.
5	TONY HENRIQUEZ: Thank you. And then I
6	have sorry, trying to okay, looks like phone
7	number 916-835, and that may be Mr. Josh Blake, I
8	think. I've unmuted you. Do you have any questions?
9	That's phone number 916-835. Okay, no questions.
10	RILEY KELLY: This is Riley Kelly from the city of
11	Roseville. No questions.
12	TONY HENRIQUEZ: Thank you, Riley.
13	KOJI KAWAMURA: All right. Sounds like
14	there aren't any more questions, so let's go on ahead
15	and move on to the next presentation.
16	AUTUMN WOLFE: Okay, thank you, Koji.
17	So our next presenter is Dr. Tong Wu, our settlements
18	manager here within the Sierra Nevada region. Tong?
19	TONG WU: Good morning. My name is
20	Tong Wu. I'm settlement manager. Thank you for
21	providing an overview of the charge codes. I'm going
22	to talk about some of the details of these charge
23	codes. There are three categories of charge codes.
24	The first is Tier 1 and in Tier 1, we allocate charges
25	coming from BANC to the transmission customers. One

of the transmission customers is the merchant. For the amount that is allocated to the merchant, we allocate the amount to the merchant's customers; that's called Tier 2 allocation.

2.

2.4

And also we have CVP generators and Tracy Pump, and Lawrence Livermore load, that are modeled as generator or NGR (non-generator resources) model that's the name for modeling nonconforming load. So the WEIM, SCID will submit schedules to the ISO directly for these resources, and we also receive settlement statements from the ISO directly. And that's another resource settlement allocation. So I'm going to go through these one by one. Next slide.

Before we get into details, let me explain the term charge a little bit. The ISO uses the terminology charge and charge codes for each type of settlement for a certain amount. The ISO gives them the numerical code identifying codes, and for each amount the ISO calls it a charge. The charge can be positive or negative. Whether a charge is positive or negative, actually indicates whether it's actually a charge or a payment from the ISO. So when you see the term charge you might have a charge, it doesn't mean it's always a charge -- a cash flow from the participant to ISO. It could be the other way around.

1	Another brief explanation of the term
2	is the relationship between charge, payment, cost, and
3	benefit. Whether a charge is positive or negative, it
4	indicates cash flow, the direction of cash flow. It
5	is not directly related to cost or benefit. Let me
6	give you an example. Say I have a generator that has
7	a cost about \$30 per megawatt. So it submits a bid to
8	the ISO at \$30 per megawatt. And ISO market price is
9	lower than that \$30 per megawatt, say, \$20 per
10	megawatt. As a result of that ISO says "I want to
11	instruct your generator down a megawatt." Say I'm
12	operating at 100 megawatt. ISO says go to 99
13	megawatt.
14	So I reduce my output a megawatt. The
15	EIM is an incremental market in terms of the
16	
	settlement. The ISO settles the amount between the
17	settlement. The ISO settles the amount between the base schedule and the market instructed value or
17 18	
	base schedule and the market instructed value or
18	base schedule and the market instructed value or metered value. I'm going to talk about those in
18 19	base schedule and the market instructed value or metered value. I'm going to talk about those in detail. For this particular example, ISO instructed
18 19 20	base schedule and the market instructed value or metered value. I'm going to talk about those in detail. For this particular example, ISO instructed the generator to go down a megawatt so the decremental
18 19 20 21	base schedule and the market instructed value or metered value. I'm going to talk about those in detail. For this particular example, ISO instructed the generator to go down a megawatt so the decremental amount is a megawatt, so in this case, the generator
18 19 20 21 22	base schedule and the market instructed value or metered value. I'm going to talk about those in detail. For this particular example, ISO instructed the generator to go down a megawatt so the decremental amount is a megawatt, so in this case, the generator will get charged \$20 per megawatt.

1	megawatt. So when the generator gets dispatched down,
2	it is paying \$20. So for that megawatt the generator
3	is not generating if the generator has an opportunity
4	to release water and generate in the future hour to
5	make \$30 per megawatt, actually paying \$20 at this
6	moment is a benefit.
7	You could consider the opportunity
8	where the potential benefit is \$10. For the same
9	amount of water and generation that I'm not
10	dispatching now, I'm saving it for future and I could
11	potentially make \$10.
12	TONY HENRIQUEZ: Dr. Wu?
13	TONG WU: Yes.
14	TONY HENRIQUEZ: I apologize for
15	interrupting. I received a request, if you could
16	speak up just a little bit more.
17	TONG WU: Okay. Maybe get the
18	microphone closer to me.
19	TONY HENRIQUEZ: Sorry, we're I
20	guess they're receiving a little bit of static on
21	their end.
22	TONG WU: Okay. Is it better now?
23	TONY HENRIQUEZ: Yes, that's better.
24	TONG WU: Okay. So I just tried to
25	clarify the term "charge." With that out of the way,
	Page 60

1 let's talk about specific charges. I'm talking about 2. Tier 1 allocation here. For Tier 1 allocation, there are only two charge codes. They're all related to 3 instructed imbalance energy. One is 15-minutes market 4 instructed imbalance energy. The other is real-time 6 market instructed imbalance energy. 7 For these two charge codes, these 8 charges, we're going to allocate these charges 9 according to the information on the eTags because we 10 do not submit any participating resources through BANC 11 to the ISO, so they instructed imbalance energy would 12 only occur on interties. 13 So when there are involuntary 14 interties schedule changes after T minus 57 -- that's 15 the time when merchant can no longer change the 16 schedules -- so anything after T minus 57, just 17 depends on BANC and ISO. When that schedule changes, the change 18 is considered instructed imbalance energy and there 19 will be settlement for that deviation from the 20 2.1 schedule. And we can use the information on the tag 22 to identify which party this settlement should go to. For all the other charge codes, all the other charges, 23 2.4 we will allocate according to metered demand. say, load ratios. Next slide, please. There's a long 25

Т	list of charge codes. I grouped them so it's
2	convenient for me to present. Let's just go through
3	these groups. Later on, I'm going to show you the
4	whole list of charges, all of them, but now let's
5	just go through the groups for convenience.
6	The first one is GMC, grid management
7	charge. ISO as a not-profit organization, they use
8	GMC to collect money to support their operations.
9	That is allocated by load ratios. The second one is
10	scheduling coordinator charge. In order to do
11	business with ISO, you have to register a scheduling
12	coordinator ID. In this case, BANC would have to
13	register a SCID. For the SCID, there's a \$1,000 per
14	month charge and WAPA would get its portion of that,
15	and then WAPA will allocate this by load ratios.
16	The next two, 64600, 64700, these
17	charges were already discussed. These will be
18	allocated according to tag information. The next one
19	is real time uninstructed imbalance energy. We talked
20	about instructed; now it's uninstructed, basically,
21	that's the difference between what the load schedule
22	is and what the meter value for the load is. That's
23	uninstructed. After you consider instructed,
24	uninstructed, there will be some energy that's not
25	accounted for because different ways of loss estimate.

ISO has ISO's way of calculating loss in their system and then when we report meter data, we have another way to do that, so there are differences between the loss estimates. That becomes unaccounted for, though, and will be settled. Entire settlement is also (inaudible).

2.1

2.4

Even though we can balance all the energy, but from money point of view, after you have settled instructed, uninstructed, and accounted for, there will be some money left on the table. One source of this is called congestion offset because ISO settles energy using the so-called locational of marginal prices and the LMPs have a component -- a congestion component.

It's a value placed on congestion from one point to the other. So because of the value, if there's a congestion from a generator to the load, the load gets charged higher than the generator gets paid, so there's money left on the table. It's the congestion revenue. So that's the source of the congestion offset. And also the losses. The ISO calculates the losses through their LMPs. There's another component called the loss component. Because of that, there's marginal loss offset. After you consider congestion offset and marginal loss offset,

there will still be left over part, either positive or negative, called imbalance energy offset -- a general offset. Those would be allocated by load ratios.

Now, let's talk about capacity. We just talked about energy. Capacity: ISO has spin and non-spin services and so there are charge codes listed there for spin and non-spin services. Those charges will be allocated according to load ratios. The next group of charge codes are related to flexible ramping capacity that can ramp up and down. The ISO needs to follow load and sometimes the load changes drastically, and so for resources who can provide flexible ramping, they'll get paid. And then people who cause the steep ramping will get charged. Some of these are payments; some of these are charges, but as far as BANC charge allocation is concerned, for WAPA, we allocate these by load ratios.

The next two are related to over scheduling and under scheduling. The ISO expects all EIM participants come to the ISO with their load and generation balanced, and EIM is a market to optimally dispatch resources, but EIM is not a place to make sure load and gen are balanced to begin with. So if you don't come in balanced, there will be over scheduling and under scheduling charges.

1 They have an incentive mechanism as 2 some EIM entities are balanced and some other entities 3 not balanced. The money that they collect from people who are not balanced would be allocated to the EIM 4 5 entities who are balanced. So that's the slide --6 there are two charges: one is charge and the other is allocation of the collection from others. 8 The next group: it just lists a whole 9 bunch of different (inaudible) things. One thing is 10 the real time bid cost recovery. The ISO pays 11 generator according to LMP, so there are situations 12 when the LMP may be lower than the generator's bid. 13 In that case, if ISO still wants that generator, ISO would make whole for the -- to the 14 15 generator, paying a bid cost recovery amount to make 16 the generator whole. And because of that, ISO has to 17 allocate the bid costs -- bid cost recovery cost to 18 load. And there's also system-wide, system imbalance 19 energy offset. That's the third category, those are 20 allocated by load ratio. Okay, next slide. 2.1 Now, I went through these category, 22 just to give you an overview of the type of charges. But if you want to know more about it, you can go to 23 2.4 the table that was part of the material posted on the website. I'm not going to go through each one of 25

these charges in detail, but I want to go through these columns so when you read it, you understand the structure of the table.

2.1

2.4

First column is the charge code. Now, if it is a three-digit code, it's for a BANC balancing account. It has a BANC specific, not ISO, charge code, but the rest of the charge codes are the same as the ISO charge code. You can go to the ISO website, go to their business practice manual section, and you can look up the explanation for each one of the charge codes. Also BANC published their allocation manual. You can find the explanation for each one of these charge codes.

So the second column is basically -- a name for that code. The third column is called BANC allocation basis. This is how BANC would allocate these charge codes. The next column is called WAPA Tier-1 allocation. That's how WAPA would allocate each of these charges to its transmission customers, including WAPA merchant. And then the next two columns are allocations for "TPUD to BANC" and "Others". Those two columns represent the Tier 2 allocation within WAPA merchant as one of the transmission customers. TPUD is one of the largest load in the sub-BA and because of agreements between

1	TPUD and another BANC participants, their settlement
2	is separate than the rest of the conforming load.
3	The rest of conforming load charges are allocated to
4	PRR.
5	I'm going to talk about these in
6	greater detail in my later presentation. At this
7	point, I just want to point out these are columns,
8	what they are. And then the second column from the
9	right is labeled as "Allocation Granularity," based on
10	which we say load ratio is by daily load ratio,
11	monthly or hourly. There you can find that.
12	The last column indicates which rate
13	schedule would apply and Autumn will talk about these
14	rate schedules after my presentation. Okay. Next
15	slide.
16	COURT REPORTER: Hello? Hello, this is
17	the court reporter. Excuse me. I can't I lost Mr.
18	Wu. I cannot hear him. When he said, "Next slide,"
19	and I guess he went to slide 42.
20	TONY HENRIQUEZ: Yeah, hey, Tong. Can
21	you go that last you were muted or something or we
22	lost you there.
23	TONG WU: Well, that last yeah, the
24	previous slide was the table that has all the details
25	of each charge code coming from BANC. And I was
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1	explaining the columns of that table. I don't know
2	where I got lost, but the last column was the
3	applicable rate schedule for each one of those charge
4	codes. The second column from the last, that column
5	describes the granularity of load ratio allocation
6	because for majority of these charges, we're going to
7	use load ratio to allocate them.
8	And for load ratios, some of the load
9	ratios are hourly, some are daily, some are monthly.
LO	And so that column describes the granularity. I don't
L1	know where my audio signal got lost or if I need to
L2	repeat the whole slide.
L3	TONY HENRIQUEZ: No, that's good, Tong.
L4	That's good.
L5	TONG WU: Okay. All right. So we just
L6	went over Tier 1 allocation. That's the allocation
L7	from WAPA to the transmission customer. So now we're
L8	going to move to Tier 2. Tier 2 is about allocation
L9	from WAPA merchants to its customers, basically its
20	load customers. So for Tier 2 allocation, again,
21	first we're going to identify those tags that have to
22	do with the Instructed Imbalance Energy deviation -
23	IIE, and after that, we're going to allocate all other
24	charge codes by load ratio.
25	First, we would allocate charge codes

1 according to load ratio for TPUD and the rest would go 2 to PRR. Now, so BANC needs to take care of TPUD -take care of the amounts allocated to TPUD. 3 simplified the process; instead of receiving numbers 4 5 and do the calculations and send numbers back to them, 6 BANC graciously agreed to do that calculation, to minimize the back and forth transfer of numbers, which simplified IT development. So actually, BANC will 8 9 calculate the TPUD portion. 10 Okay, next slide. There are a few 11 charge codes WAPA will take care of for TPUD and these 12 are the instructed deviation and uninstructed 13 deviation. Since TPUD does not have intertie transaction directly, the instructed imbalance energy 14 15 charge codes 64600, 64700 do not apply directly. Only 16 the first one, the 64750, applies. That charge code represents uninstructed imbalance energy in EIM 17 settlement. That charge code has to do with the 18 19 difference between scheduled energy and the metered 20 energy. So when we forecast TPUDs load, we meet 2.1 22 the load with CVP hydro. Once we go EIM, the ISO will forecast the total and we forecast TPUDs load 23 2.4 schedule. And then at the end of day, the meter

quantify will be different from the load schedule.

25

1 WAPA will take care of that difference because TPUD is a first preference customer. TPUD is in WAPA's sub-2 We take care of TPUD. 3 BA. 4 For other first preference customers, 5 when they have uninstructed balance charge today, the 6 ISO charges us. We do not pass those charges to the first preference customers in the ISO. So the 8 treatment here for TPUD is consistent with how we 9 treat other first preference customers in the ISO. 10 Because they are first preference customers, we're 11 supposed to meet their load. When our forecast is different from the 12 13 actual today for TPUD, we will just use our CVP 14 generation or we will make purchase for the control 15 area, and a part of that purchase would go to TPUD. 16 But today, we need to balance physically, but after 17 joining EIM, the ISO will dispatch generation to meet 18 that imbalance, or, a portion of that. If ISO 19 dispatch generators either in or outside sub-BA to 20 meet TPUD's load in real time, we will pay for that. 2.1 And again, here, the charge -- this 22 charge, 64750, could be positive or negative, as I indicated earlier. If the forecast is higher than the 23 meter, actually that charge will be negative. 24 25 means ISO will pay us for that. But if we under Page 70

1 schedule and the metered load number is higher than 2 the forecast, then the ISO will charge us. And so it doesn't matter whether it is positive or negative, 3 that amount will go to PRR. 4 5 For all the rest of the charges, they 6 would go to BANC. BANC members would either pay -again those amounts that go to BANC, can either be 8 positive or negative, or be paid the amounts. Okay, 9 next slide. This is how BANC will do that. 10 11 day, BANC would calculate TPUD allocations for each 12 charge sent to WAPA and determine whether that amount 13 is for WAPA or TPUD. And on a monthly basis for that portion that is allocated to WAPA, excluding TPUD, 14 15 WAPA will get invoiced. For the TPUD portion, BANC 16 will get the invoice and BANC will track TPUD's 17 portion of the charges. Next slide. 18 Okay. Now, I'm going to switch gear to talk about WEIM. To talk about the CVP generators and 19 20 the two nonconforming load that we submit to the ISO 21 directly and receive settlement statements from the 22 ISO directly. The three generators Shasta-Trinity, 23 New Melones and Folsom-Nimbus. These are generator 24 aggregations, and then Tracy Pump. They're all WAPA's resources, CVP generation and Tracy Pump (inaudible). 25

1 There is another load, Lawrence Livermore load. 2 load has supercomputer load and the whole Lawrence Livermore load is considered a nonconforming load. 3 ISO has difficulty forecasting nonconforming load. 4 5 And so we will forecast and schedule NGR is a model used 6 the load with the ISO as a NGR. by the ISO to schedule nonconforming load. That's one 8 of the purpose of the NGR model. For NGR, for these 9 two resources, Tracy Pump and LLNL, we do not submit a We just submit a base schedule and they will not 10 11 be dispatched and they'll be treated as load. All 12 right. Next slide. 13 Okay. For each of the charge codes, they will be obligated to one of these categories. 14 15 Let's go counterclockwise, starting with LLNL NGR. The 16 charge code based on -- will be based on certain 17 criteria: the resource ID or either load or meter gen 18 or just direct pass-through to PRR. So for each one 19 of the charge code, it will have -- it will go to one 20 of these buckets. LLNL, Tracy Pump, Trinity 21 aggregation, Folsom aggregation (inaudible). And some 22 charge codes cannot be allocated easily, and also it -- part of it, it's not proper to do the allocations. 23 24 For simplicity, those charges will be passed to WAPA merchant and to PRR at reckoning. For all these 25

buckets except the LLNL, they will all go to PRR, because either they are CVP generation or project (inaudible). For LLNL, for the portion that is allocated to LLNL, it will be billed to the Lawrence Livermore lab. Next slide.

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Now, let's go to -- let's go over details how each charge is allocated to one of those buckets. The first method is by resource ID. Each one of these resources, whether they're generation or NGR, has a unique resource ID. For instructed and uninstructed deviation, they can be easily allocated based on the resource ID. And for the SCID charge, and we already -- we mentioned that for the SCID there's a monthly \$1,000 charge. We will divide that by five because there are five resources. Each resource will get \$200. LLNL will get \$200 and the rest of \$800 will go to the other resources, and then eventually end up in PRR. And then some charge codes are allocated by meter ratio share and here, when we say meter ratio share, we mean absolute value of the metered quantities. We don't use positive sign for gen and negative sign for load. They're all positive. We make them all positive. Just straight meter ratio. These meter ratios are calculated on hourly, daily, and monthly basis according to the particular charge.

1 We'll go through that. 2 And the rest of the charges, just go through WAPA merchant and pass through PRR. We'll go 3 through the details. Next. These are the three 4 5 charges. The instructed and uninstructed will pass 6 these charges by resource ID. 7 These are the charges that we will 8 allocate based on meter ratio share. Let me go 9 through these briefly. First of all, enforcement protocol. So when somebody submit their meter data 10 11 late or some other (inaudible) some other ISO 12 protocols, the ISO will charge that entity. Once that 13 entity pays the ISO, the ISO would allocate that to the rest of the market in principal, to people who pay 14 15 GMC. So that amount, the payment, will be allocated 16 based on meter ratio monthly. 17 That's ISO's grid management GMC. ISO collects GMC from the market. That will 18 charge. 19 be allocated according to our rate meter ratio. 20 next four charges are related to flexible ramping. 2.1 These would be allocated according to meter ratio 22 based on the granularity of that charge code. The ISO 23 allocated that data. We allocate data. ISO allocate that. Allocates that monthly. We use monthly meter 2.4 ratio. Those are the -- one of them. 25

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The next two 7989, 7999, those are related to interest. The ISO use a incremental settlement method, meaning that they settle three days after market is settled, 12 days after the market, using estimated meter data and then they settle again 55 days after the market when the real meter comes in. So they want to settle as soon as possible, so to make sure that market participant receive money or pay bill quickly. But then, the true up, as they go through the next billing cycle.

But between these billing cycles, they calculate the interest, so they charge interest or they pay interest, depending on how your meter data, where it's above or below the estimates.

And so there are two. One is they charge the interest. The other is they pay the interest. Those will be allocated based on meter ratio data. Generators and their connection process allocation, some generator loss to the grid and ISO requires a deposit, and then the process that we go through, the amount is forfeited by the ISO, then the ISO (inaudible) that amount to the market based on who pays GMC. That's the last one. These are the charges that we'll be able to give by meter result here. Next slide.

1	These charges will be passed to WAPA
2	PRR directly. Some of them is because they share;
3	some of them just for convenience. Let's go through
4	them.
5	Default interest payment. Sometimes,
6	the defaults, they owe interest to the ISO, so they
7	pay ISO interest, ISO allocates that to the market.
8	That's the default interest charge. If WAPA
9	defaults, WAPA will pay ISO interest and WAPA will not
10	default, but those two are linked together. They just
11	go to PRR.
12	GMC transactions fee. ISO charges a
13	small amount for every segment of the bid, the energy
14	bid. You can have many segments. Say, \$20 per
15	megawatt up to this amount, and above that, I want
16	\$30. There's bid curve for each one of the segment
17	ISO charges. Actual CVP will participate in EIM, so
18	CVP will submit by sensitive bids, the load will not.
19	LLNL cannot. The Lawrence Livermore load will not
20	even submit any bid at all. So therefore, this one
21	goes to PRR directly. Invoice and BANC payment
22	penalty. If WAPA is late on paying the bill, there
23	are several times (inaudible) late or payment
24	(inaudible), WAPA never got into that situation but if
25	we do, that will go to PRR.

1 Financial security posting collateral. 2 If we need to post collateral, like a federal 3 government, we cannot post monetary collateral, but if we do stand -- if we were late on payment, that's the 4 5 charge. So that will keep (inaudible). Flexible ranking forecast movement 6 settlement and the next two. 7071 and 7081, these two 7 8 are -- have to do with a resource. It is a payment to 9 the resources who provide flexible ranking. Only CVP generation can provide flexible ranking and Tracy Pump 10 11 and LLNL looks not, so therefore, it doesn't make 12 sense to allocate to the load, so these two will go to 13 PRR because, yes, we were allocating these two CVP 14 generators, we will go into PRR anyway. 7070 is 15 related to these payments as well. It's an 16 adjustment, so all these three go to PRR directly. 17 Bid cost recovery settlement. So if CVP (inaudible) bid a certain amount, say \$30 and then 18 the LMP is lower than \$30, the ISO would pay bid cost 19 20 recovery payment to CVP generation and this is -- the load cannot -- the load will not bid in the ISO 2.1 market, so the bid cost recovery doesn't have much to 22 do with the loads, so this charge, they allocate to 23 2.4 PRR directly for simplicity. So that's the allocation methods and so it's direct pass through to PRR for 25

1	these charge codes. Next.
2	I think this is the last one. Yeah.
3	That concludes my presentation. Let's go to any
4	questions.
5	KOJI KAWAMURA: Thank you, Tong, for
6	your presentation. Tony I don't see any questions
7	in the chat. Do you have any do you see any raised
8	hands?
9	TONY HENRIQUEZ: So I do have a
10	question that was sent directly to me. It looks like
11	it's from Bill Hughes and I'm going to go ahead and
12	unmute Bill. Go ahead, Bill. BILL HUGHES: Hi. I do
13	have a question. Just wanted to point out that there
14	was a discrepancy on these slides. slide 40 said
15	charge code 4575, which is the SCID fee that's been
16	allocated, the above ratio share and then slide 47
17	showed it as being a simple division by five. So I
18	just wanted to point out that there was a discrepancy
19	there.
20	TONG WU: 4575 SCID charge. Where is
21	the discrepancy? On which page? BILL HUGHES: Well,
22	you can see on this one, the current page, it says
23	\$1,000 divided by five, but
24	TONG WU: Yeah.
25	BILL HUGHES: slide 40

1	TONG WU: Okay. BILL HUGHES:
2	share.
3	TONG WU: Let's go to 40.
4	BILL HUGHES: (inaudible).
5	TONG WU: Yeah. Because yeah.
6	That's very good question. That helps to clarify
7	things. This is a Tier 1, so here, what we use, load
8	ratio, we're allocating the amount coming from BANC to
9	our transmission customers and then they actually go
10	to (inaudible) customer. This is a charge coming from
11	ISO through the BANC EIM entity, but the other one,
12	later on I think it's Page 47, for the settling charge
13	problem, that is allocation for the so-called
14	participating resource SCID to this participating
15	resources.
16	This amount comes from the ISO directly
17	for the SCID (inaudible) EIM. This is not the BANC's
18	SCID. So we're using different methodology here to
19	allocate BANC's charge, the load versus the same
20	charge code coming from the ISO to the resources.
21	BILL HUGHES: Okay. Yes, I understand
22	now. Thank you.
23	TONG WU: Okay.
24	TONY HENRIQUEZ: Okay, thank you about
25	that. Looks like I have a question from Ms. Regina
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	rage /9

1	Rieger. I'm going to go ahead and unmute you. Go
2	ahead, Regina.
3	REGINA RIEGER: Tong, thank you for
4	your detailed presentation. It was helpful. I did
5	have a question. On slide 39, you were referencing
6	changes at the intertie after T 57 and the
7	implications. Does that relate also to changes at
8	Tracy Pumps and if so, do you have a sense of how
9	often that might happen?
10	TONG WU: Yeah. For change okay,
11	for instructed imbalanced energy, coming from BANC as
12	the EIM entity, those would occur on interties only,
13	because we do not have any participating or
14	nonparticipating resources to rule BANC's EIM entity.
15	Only conforming mode are submitted to ISO using EIM
16	entity as the SCID. So only the instructed imbalance
17	on intertie applies, so those would go with the e-tag.
18	That has to do with T minus 57. As far as Tracy Pump
19	is concerned, Tracy Pump is not a schedule on
20	intertie. It is a NCR that is scheduled as a special
21	load through the ISO. If that load deviates from its
22	schedule, it is not going to be instructed. It's
23	going to be uninstructed. It would be the the
24	difference would be between its schedule and
25	(inaudible). That would be considered unscheduled
	Page 80

1	deviation. That is one of the three charge codes I
2	listed there, but it is not going to be the same as
3	the instructed.
4	Your question is still valid. Would
5	Tracy Pumps schedule be different its meter mode, to
6	what extent there would be different from its meter
7	load, regardless what charge code would apply. But
8	that question, I don't know. We'll have to see.
9	REGINA RIEGER: Thank you. That's I
10	appreciate the clarification and that would be good
11	information to know, given the volume of those pumps
12	related to the conforming load as a ratio. One other
13	question, if I may. Sorry about that. On slide 41, I
14	believe, the first three charge codes listed there,
15	100, 101, and 102 have no applicable rate schedule.
16	Can you clarify how those costs are allocated?
17	TONG WU: Yeah
18	REGINA RIEGER: What is it, under
19	what rule?
20	TONG WU: Right. For us, they will be
21	allocated based on the load ratio. If you look at
22	one, column enter WAPA first tier allocation and also
23	second tier allocation, if you (inaudible) to BANC,
24	those are all those ratios. So for us, we just
25	allocate those by load ratios. But in terms of the
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1 rate schedule, applicable load rate schedule, I think maybe Autumn will present that later on, regarding 2 3 which rate schedule would apply. These are specific charge coming from 4 5 BANC, not from an ISO. For example, the first one, 6 BANC balance in the account. BANC will calculate -try to allocate each one of those charges to either the fifth decimal or something. They try to allocate 8 9 it as accurate as is possible, but because of the numerical errors at the end of the day, there might be 10 11 some residual. I don't expect accuracy to the fifth 12 dig, but that would go to 100. 13 There are some BANC pass through 14 billing charges, let's all it pass through billing 15 Those are pass through case by case basis. 16 BANC does not have six -- like, depending on what's 17 the nature of that pass through. One or two, BANC 18 miscellaneous charge. That's just a miscellaneous, a 19 lot of things that it doesn't occur routinely or a 20 small amount. I don't know whether that answers your question. Those are kind of catch-all kind of charge 21 codes, used by BANC to take care of things that might 22 not have been explicitly specified. 23 2.4 REGINA RIEGER: Thank you, Tong. 25 quess what I was looking for, and maybe I should ask Page 82

1	this more clearly, if it's not a reschedule, is it
2	pursuant to a business process?
3	TONG WU: As far as a business process
4	is concerned, there is business process manual, BP-
5	044, and there is this table so the methodology for
6	allocating these charges are clear, explicit. They're
7	done by load ratio (inaudible).
8	REGINA RIEGER: Okay, thank you.
9	TONG WU: Yeah.
10	REGINA RIEGER: No further questions.
11	Thank you.
12	TONG WU: Okay.
13	TONY HENRIQUEZ: Thank you, Regina.
14	Thank you, Dr. Wu. So I'm checking for any raised
15	hands and I don't see any and I don't have any other
16	texts in my inbox, in my chat box.
17	KOJI KAWAMURA: Yeah, why don't you
18	open up the lines next. Yeah.
19	TONY HENRIQUEZ: Okay. So I'm unmuting
20	Riley Kelly. Riley, do you have any questions?
21	RILEY KELLY: No. No questions on my
22	end. Thank you.
23	TONY HENRIQUEZ: Thank you. And that
24	is the only line that I have right now, Koji.
25	KOJI KAWAMURA: All right, thank you,
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1	Tony. So let's if there are no more questions,
2	let's go on ahead and move to the next presenter.
3	AUTUMN WOLFE: Okay, so Robert Delizo,
4	our resources and scheduling manager will share a
5	little bit of information on EIM resource valuation.
6	This is where we get into the benefits that we may
7	realize for participating in the EIM market. Robert?
8	ROBERT DELIZO: All right, good morning. Can you
9	hear me?
10	TONY HENRIQUEZ: Yes, we can hear you,
11	Robert.
12	AUTUMN WOLFE: Thank you.
13	ROBERT DELIZO: Thank you. All right.
14	So thank you for taking the time to participate in
15	today's rates public information and comment forum in
16	order to understand WAPA's plans for EIM
17	participation, originally started our schedule to
18	start in April 2021, and as you've heard, that date
19	has been moved up to March 25, 2021.
20	So this presentation will focus on the
21	calculation of potential EIM dispatch benefits for
22	using Central Valley Project and strategies for
23	participating or getting into the types of energy
24	(inaudible) market.
25	So in this slide, the following are
	Page 84

1 the assumptions used in the valuations. The 2 calculations are a refresh of what we presented last 3 year to the customers and also we presented this in the June 8 informational customer meeting as well. 4 5 We assume reserve capacity that was 6 available for marketable research offers, but it dropped to resource and we got the capacity to 60 8 megawatts where the capacity is higher than 50. 9 Otherwise, we use the actual volume. And for EIM dispatch, we assume there's a plus or minus of 50 10 11 megawatts flexibility from the basis schedules that is 12 (inaudible) that dispatch about 50 megawatts, if 50 13 megawatts is available. Otherwise, that's limited to the actual marketable reserves that were available in 14 15 our schedule. 16 We applied a 200-megawatt cumulative 17 generated energy or purchased energy as a constraint in either direction. This means that if the resource 18 19 is continuously being (inaudible), we cap that to 200 20 megawatts, then assume that the bidding is put on hold 2.1 until the resource receives that dispatch. 22 So at the end of the day, the resource 23 can potentially be a net positive or negative energy 2.4 position. This means that we have either too much or purchased too much compared to 25

1	scheduled generation for the day. So 600-megawatt
2	cap for the week is applied similarly to the 300-
3	megawatt cap. For that adverse impact to the daily
4	schedule of CVP generation for its normal use or
5	allocation to have purchased for project use, first
6	preference energy, the needs for the SBA and also for
7	rates resource.
8	And we also assume that the load
9	matches the EIM resource schedule such that I think at
10	that dispatch is either sale or purchase
11	opportunities, respectively. Next slide.
12	So this slide shows an illustrated
13	example of balancing supply and demand in the SBA or
14	sub-balancing authority area, other EIM. So resources
15	are comprised of generation and imports while demand
16	is comprised of (inaudible) load, (inaudible) model
17	that NGRs, and exports.
18	Imports and exports here are from the
19	WAPA and SBA perspective, meaning imports are energy
20	transactions that originate from outside the SBA and
21	sync in the SBA, while exports are energy transactions
22	originating from the SBA and sync outside of the SBA.
23	NGR here stands for non-generator resource. As
0.4	
24	mentioned earlier, this model is used for

1 and the Lawrence Livermore Nation Lab load. What that 2 means is WAPA and USBR are able to forecast that load better than the ISO, so those loads are essentially 3 not part of the boundaries for CAISO's load forecast 4 5 under EIM. 6 So WAPA's NGRs are model of generation 7 type resources with generate -- with negative 8 generation and all the update schedules and no 9 (inaudible) bids, as mentioned earlier, and they will be considered as self-scheduled resources, so from EIM 10 11 generation based schedule point of view, the NGRs are 12 loads that served by the generators, as you can see on 13 the right side. 14 In total, WAPA's EIM generation is 15 comprised of all the USBR's generation facilities that 16 are situated or consider situated in the SBA, just 17 like (inaudible). These allocated resources are based 18 to date on geographical location that line up with 19 reservoir and river flow management requirements and 20 transmission paths that are considered in our 2.1 scheduling. All right, so next slide. This shows 22 that WAPA is the next order of CVP energy. 23 These export schedules are part of the 2.4 basis schedules of WAPA under EIM. So depending on 25 the price between LMP and the bid price, we foresee

taking lower priced energy to serve our SBA load or
selling energy outside of the SBA. This portrays our
sales -- our decremental or incremental dispatches of
the EIM generator resources as shown here in the
examples you have (inaudible), indicating certain EIM
resources going down or going up.

2.4

All right, so next slide. Ideally, you have the net energy generated and purchased in the day should be zero. That would indicate that reclamation is water neutral for the day. The goals of the EIM dispatches are to achieve high value sales from incremental dispatches to the day's schedules and lower price purchases from decremental dispatch to the day's schedules.

In our simulation, we ran four cases to show that all of these prices are indicated for each phase. Phase one here is a scenario where we intend to bid at cost for all hours. In this case, we are willing to sell energy for higher and purchase energy for lower than our cost. Phase two is a case where we perceive a need to generate, are probably willing to do so if the price is not negative. And phase three and four are attempts to simulate managing the reservoir levels.

The bid prices are intended to realize

1	opportunities for using EIM dispatches to manage the
2	reservoir levels. So note that the simulation used
3	the static bids and basically, you can consider it
4	being on a qualified mode and I'll show more to that
5	later. There is no selective placement of bids or
б	inter-hour merchant adjustments of the bids to
7	optimize sale and purchase dispatch.
8	Next slide. All right. So this chart
9	shows the interplay of the 15-minute market prices and
10	the real time dispatch for (inaudible) prices and the
11	resulting FMM award and RTD dispatches. So the two
12	lines that are tracking together of olive and red
13	lines are the FMM and RTD LMPs.
14	When the FMM LMP is higher than the
15	bid price indicated here by the gray dotted lines, the
16	
10	resource has an inc award and when the FMM LMP is
17	resource has an inc award and when the FMM LMP is lower than the bid price, it reduces that award.
17	lower than the bid price, it reduces that award.
17 18	lower than the bid price, it reduces that award. So the FMM award is shown by the green
17 18 19	lower than the bid price, it reduces that award. So the FMM award is shown by the green line which gives us the secondary axis on the right,
17 18 19 20	lower than the bid price, it reduces that award. So the FMM award is shown by the green line which gives us the secondary axis on the right, the values of plus 1 or minus 1, meaning inc or dec.
17 18 19 20 21	lower than the bid price, it reduces that award. So the FMM award is shown by the green line which gives us the secondary axis on the right, the values of plus 1 or minus 1, meaning inc or dec. The five-minute dispatches are shown by the blue dots,
17 18 19 20 21 22	lower than the bid price, it reduces that award. So the FMM award is shown by the green line which gives us the secondary axis on the right, the values of plus 1 or minus 1, meaning inc or dec. The five-minute dispatches are shown by the blue dots, which are also using the secondary access and are

1 bottom shows the application of the 300-megawatt cap 2 that we put to kind of manage the dispatch. You can see here the green, hours 16 and 19, the decremental 3 dispatches are suppressed due to discount. And this 4 slide in particular shows a phase three scenario. 6 You can see the bid price around \$15, which is half of the cost that we have indicated previously. 8 All right, next slide. And this is 9 similar to the previous one, except that it is for a phase four scenario. Due to the higher bid price in 10 11 the latter half of the day compared to phase three, 12 there are a number of FMM (inaudible) after hour 13 ending 19 where the FMM price is lower and that resulted in dec awards. In the next slide, I'll go --14 15 I'll show relative volumes of inc and dec dispatches 16 as well as the extent of the cumulative daily net 17 generation. So let's go to the next slide. This slide is only for the period of 18 January to May this year. Like I said, shows the 19 20 relative volume of purchased and sold energy on a 21 daily basis. The gold bars represent sales and the 22 light green bars represent the purchases. And the 23 dashed lines at the bottom indicated the net position 24 for each day, so you can see here, it's mostly dates showing net purchases. 25

1 And as we mentioned previously, to 2 continue with accrual in one direction will not be sustainable for reclamation at the managed reservoir 3 levels, which is why we put that 600-megawatt cap, and 4 5 I'll show that again in the next slide. 6 So let's go to the next slide. So like 7 I said, the simulation is pretty much on autopilot 8 mode, which is why it would make that 600-megawatt hour cap for each week so that we could manage the 9 amount of cumulative dispatches to that reclamation 10 11 will be able to manage the reservoir levels with that 12 constraint, basically (inaudible). 13 Like I mentioned earlier, the 14 simulation gives the static bids and what pretty much 15 on autopilot mode. That controls basically the 16 breadth of the dispatch and once the caps are met, and 17 that is shown by the periodic no-purchase, no-sale days in the week, as you can see here in this chart. 18 19 All right, so let's go to the next 20 slide. Regarding the results of the simulations, so 2.1 the table on top shows the some of the daily imported 22 or purchased energy from the market and also some of the daily exported or sold energy to the market. 23 The 2.4 table at the bottom shows the counts of the days with 25 imports or purchases and exports or sales.

indicated are the counts of days with the net imports and days with net exports.

2.1

2.4

All right. So that's for that slide.

Let's go to the next slide. Next slide, please. So this shows a summary of the EIM -- let's go back to the previous one. This shows the summary of the EIM dispatch benefit. The purchase benefits represent cost savings. For example, the FMM that dispatch will result in cost savings of the difference between the break-in cost and the FMM LMP. I think Dr. Wu alluded to this activation earlier.

The savings that we get is basically the difference of those two prices. These numbers are a result of interplay available capacity of the bid prices, LMPs, as well as the caps that we put in place. The total EIM dispatch benefit is the sum of both the sale benefit and purchase benefit. Next slide. So as we mentioned earlier, we use the spinning reserve capacity as a proxy for EIM resource capacity, and this slide is intended to provide kind of (inaudible) of the cost and only for illustrative purposes only to show a more accurate depiction of the benefits for the alternative use of the capacity. The EIM dispatch benefit is reduced by the spinning reserve revenues that we would have realized if that

	capacity was sold in that market. So these
2	calculations assume that WAPA participated in EIM
3	since January 2017.
4	All right, so let's go to the next
5	slide. The previous slide showed kind of a run of the
6	simulation that's pretty much a continuous basis,
7	meaning like I said earlier, if we were in the market
8	for EIM since January 2017, then we would have tracked
9	that set of numbers. This slide, though, is a version
10	of that simulation where we use historical average
11	numbers. In a way, it's a calculation for potential
12	future values. This applied to average spinning
13	reserve capacities as well as average FMM, RTD, and
14	the spinning reserve market clearing prices.
15	Again, spinning reserve capacity gives
16	us proxy resource for EIM resource capacity that this
17	slide is intended to provide illustrative numbers
18	only. So these calculations are projected net EIM
19	dispatch benefits. Okay, so let's go to the next
20	slide. We put this slide together to compare the
21	dispatch benefits with the estimated ongoing EIM cost
22	and estimated load-based costs. This is for the
23	purposed of coming up with a rough estimate of
24	potential future net EIM benefits.
25	Please note that the load-based costs

1	may fluctuate as they are a function of market prices.
2	This shows that there could be net EIM benefits that
3	will be applied to PRR. As I mentioned earlier, the
4	dispatch benefits, the numbers are based on the
5	interplay of the capacity, the bid prices, LMP caps;
6	hence, they may not be representative of future EIM
7	dispatch benefits. So WAPA basically cannot determine
8	with certainty the quantitative EIM dispatch benefit
9	until we are already a participating EIM.
10	So this concludes the presentation on
11	EIM resource valuations. I'd be happy to answer
12	questions about the foregoing at this time.
13	KOJI KAWAMURA: Thank you, Robert. I
14	do not see any questions in the chat. Tony, do you
15	see raised hands?
16	TONY HENRIQUEZ: So I do not see any
17	raised hands at this time or questions. Never mind, I
18	do have a question from Mr. Willie Manuel. Mr.
19	Manuel, I am unmuting you right now. go ahead.
20	WILLIE MANUEL: Thank you. Thanks,
21	Robert, for the presentation. I just have one
22	question. So did the simulations take into account
23	the limitations of hydro in terms of managing river
24	flows and reservoir levels, you know, or are they just
25	not take that in account?

1	ROBERT DELIZO: All right, thank you,
2	Willie, for the question. We tried to capture that by
3	applying the caps that we mentioned, the 200-megawatt
4	hour cap for the day. Also, we got we'll kind of
5	manage the continuous approval in one direction, and
6	therefore might be detrimental to the water management
7	needs, so we tried to limit the dispatches that they
8	accumulate and cap that to 200 megawatts for the day
9	and then wait until we get an opposing or reverse
10	direction dispatch.
11	If that didn't happen for the day, we
12	try to manage that with the application of the 600-
13	megawatt hour cap for the week, basically, make sure
14	that, you know, we got through the day net position.
15	We shouldn't go past 5600 megawatts in
16	the week. So that's kind of the control that we put
17	in place to reflect the (inaudible) you're alluding
18	to.
19	WILLIE MANUEL: So those are reflected
20	in these cases, one, two, three, and four?
21	ROBERT DELIZO: Correct.
22	WILLIE MANUEL: Yeah. Okay, thank you.
23	ROBERT DELIZO: You're welcome.
24	TONY HENRIQUEZ: Okay, this is Tony. I
25	have no questions on chat and I don't see any raised
	Page 95

1	hands. I'm going to go ahead and unmute our one phone
2	person, and I apologize for that. It's just I don't
3	think we have the ability to unmute yourself or give
4	me indication that you have a question, so I have to
5	check with you. Riley, do you have any questions?
6	RILEY KELLY: No. No question.
7	TONY HENRIQUEZ: Okay. Thank you.
8	KOJI KAWAMURA: All right, seeing there
9	are no more questions, let's go ahead and move on to
10	the next presenter.
11	AUTUMN WOLFE: All right, thank you,
12	Koji. Okay. For this portion of the presentation, I
13	will share some more information on the new proposed
14	EIM rate schedules. Next slide, please. As I
15	mentioned earlier in the presentation, there are new
16	proposed rate schedules for EIM. The proposed EIM
17	rate schedules are an EIM administrative rate
18	schedule for EIM administrative charges.
19	We have a new proposed schedule for EIM
20	energy imbalance service and a new proposed rate
21	schedule for EIM generator imbalance service. We also
22	have proposed revisions to existing rate schedules for
23	energy imbalance service and generator imbalance
24	service. And then we have a proposed rate schedule
25	for the sale of surplus products. We have the

1 website shown on the screen on this particular slide 2 that, this is actually where you can go to find all 3 of our rate schedules in their complete form. It was a lot of information to attach to the appointment, so 4 we thought it would be better to just provide the website. You can find all the rate schedules, the 6 7 proposed and revised rate schedules, at that link. 8 Next slide, please. We'd like to start 9 by sharing the structure of our formula rates. have three components to all of our rates. Component 10 11 one is actually different for each of our rate 12 schedules. It describes the formula rate or the 13 penalty. Then there's component two, which is 14 basically (inaudible) to pass through regulatory 15 charges or credits to relevant customers. And this is 16 standard language that's included in all of our rate 17 schedules. 18 So component two is the same in every rate schedule we have posted. And then we have 19 20 component three which, similar to component two, is a 21 pass through of charges, except this one is for the 22 pass-through charges for balance authorities, and this is the pass through -- this is for the pass through of 23 2.4 charges or credits. And again, this is standard language in all of our rate schedules. 25

1 Next slide, please. So before I get 2 into the details for component one of each of the new proposed EIM rate schedules, I'd like to go over the 3 standard language for components two and three that I 4 5 mentioned apply to all of our rate schedules. So this 6 one actually shows the standard language for component two. 8 I won't read through it because it is 9 rather long, but it basically states that we will pass 10 through to our customers regulatory charges or credits 11 for FERC, and FERC stands for the Federal Energy 12 Regulation Commission, and then other charges that 13 might be incurred from other regulatory bodies. slide, please. 14 15 This slide shows the standard language 16 for component three, and basically what this component 17 is showing is that we will pass through to our 18 customers balance authority charges or credits that 19 are applied to WAPA, so that's what this component 20 represents. And again, components two and three are the same in all of our rate schedules that we have 2.1 22 posted. Next slide, please. 23 Now we get into the specific 2.4 information for component one of our new proposed EIM rate schedules. Here, we talk about the formula rate 25

1	for administrative charges. This is rate schedule CV-
2	EIM1S. So for component one, "The EIM administrative
3	service charge shall be sub-allocated to WAPA's
4	transmission customers based on load ratio share for
5	the time period in which WAPA incurs EIM
6	administrative costs."
7	This schedule is specific only to CAISO
8	administrative charges. The BANC administrative
9	charges will flow through the power revenue
10	requirement, as described at the beginning of the
11	presentation. So I just want to clarify that a WAPA
12	transmission customer would only be allocated CAISO
13	administrative costs if they are subject to our tariff
14	and if they have load within our sub-balancing
15	authority. Next slide, please.
16	Here, we share the proposed language
17	for component one for energy imbalance service, this
18	is rate schedule CV-EIM4S. For component one, "EI
19	service is the deviation of the transmission
20	customer's metered load compared to the load component
21	of the base schedule settled as uninstructed
22	imbalanced energy for the period of the deviation of
23	the applicable load aggregation point price where the
24	load is located.
25	"Unless such charges are allocated to
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the transmission customer directly by the Balancing
Authority of Northern California as the EIM entity, a
transmission customer shall be responsible for any
pass through charges or credits associated with
applicable EI service charges allocated to WAPA as the
transmission provider for its participation in the EIM
in accordance with this rate schedule. WAPA will sub
-- allocate load charges based on a transmission
customers' load ratio share."

Next slide, please. On this slide, we talk about component one for generator imbalance service. This is rate schedule CV-EIM9S. Component one states, "Unless such charges are allocated to the transmission customer directly by BANC as the EIM entity, a transmission customer shall be responsible for any pass-through charges or credits associated with applicable GI service charges allocated to WAPA as transmission provider for its participation in EIM in accordance with its rate schedule. "Such charges may include those due to operational adjustments of any affected interchange. WAPA will direct assign charges and/or sub-allocate charges based on the transmission customer's load ratio share." Next slide, please.

On this slide, we share specific

1	information regarding supplemental transmission
2	charges while participating in EIM. Since FERC
3	requires that entities participating in EIM already
4	have transmission, there are no incremental
5	transmission charges assessed for when participating
6	in EIM.
7	We have specific language in our tariff
8	that states "unless subsequently imposed by CAISO as
9	the market operator, as part of the market operator
L O	tariff and promulgated by WAPA through rate
L1	proceedings, there shall be no incremental
L2	transmission charge assessed for transmission use
L3	related to the energy imbalance market. Transmission
L4	customers must have transmission service rights as set
L 5	forth in attachment S of WAPA's tariff. We just
L6	wanted to be clear on this piece that there will be no
L7	incremental transmission charges for participating in
L8	EIM. Next slide, please. Okay. We're just on pause
L9	here. There we go. Thank you, Tony.
20	Okay, so this table is a quick
21	reference guide to show the formula for each of the
22	new proposed EIM rate schedules and the different type
23	of charges that will settle each of the new proposed
24	rate schedules.
25	So in this first row we have schedule
	Page 101

CV-EIM1S and this is for administrative charges. The formula for allocating administrative charges is based on load ratio share and the type of charges that would settle to this new proposed rate schedule would be administrative service charges from CAISO.

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In the next row, we have schedule CV-EIM9S, generator imbalance service, and the formula for allocating generator imbalance service charges, either they will be direct assigned or sub-allocated based on load ratio share. We don't anticipate having very many charges associated with generator imbalance, but should they ever occur, depending on the type of charge, that would dictate whether it's a direct assigned charge or a charge that would be allocated based on load ratio share.

So a type of charge that might settle to Schedule 9S would be an instructed imbalanced energy type of charge. Then in the last row we have schedule CV-EIM4S for energy imbalance service and for energy imbalance service charges, they will be suballocated based on load ratio share. The different type of charges you might see that would settle to Schedule 4S would be charges like uninstructed imbalance energy, unaccounted for energy, under and over scheduling load, uplifts and offsets, bid cost

recovery, flexible ramping product, operating reserves.

2.1

2.4

Next slide, please. Okay, so we saw this EIM entity's settlement allocation summary total at -- think it was part of Tong's presentation and we just wanted to call your attention to it again as a good reference for quickly identifying which EIM charges were settled to which of the new proposed rate schedules. We have highlighted on the far right the (inaudible) of the different charges to the specific rate schedules that the charges will settle to and I'd like to take this opportunity to address the first three rows.

There was a question previously asked about why we have N/A identified as the rate schedule for those -- for three charge codes, and this is because those charges are specific to WAPA loads for EIM participation and they're not applicable to transmission customers under our tariff. The BANC EIM charges are proposed to be allocated to customers through the power revenue requirement and not to transmission customers. So I think we were just trying to capture all-inclusive different charge codes and so that's why they were added to the table. We probably should've, instead of putting N/A, we

_	probably should we put PRR in that Column there. So
2	again, these are charges that would be allocated to
3	our power revenue requirement, because they are
4	specific to WAPA's generation and load for
5	participating in EIM. Next slide, please.
6	Okay, so on this slide, we wanted to
7	show an example of how charges, EIM charges, would
8	flow through from CAISO all the way through the Tier
9	1 and Tier 2 allocation to the power revenue
- 0	requirement. So in this example, we are using GMC
1	administrative type charges that would flow through
2	from CAISO. They would flow through BANC and then
_3	they would be allocated based on the EIM
4	participating entities that net energy load.
- 5	So WAPA as a transmission provider
-6	would receive a share of those GMC charges. Our share
-7	is 24.1 percent, as we described earlier in the
-8	presentation. And those EIM I'm sorry, those GMC
_9	type charges would be allocated to WAPA merchant as a
20	transmission customer under our tariff and to other
21	transmission customers that are subject to our tariff,
22	and they would be allocated using the proposed rate
23	schedule for administrative services which is rate
24	schedule CV-EIM1S.
25	So that's the Tier 1 allocation. Then,
	Page 104

merchant, the charges are then sub-allocated, through the Tier 2 allocation to the power revenue requirement. Like I mentioned before, these are administrative costs that are -- that were described in the very beginning of the presentation and these are the costs that are going to flow through to the power revenue requirement. And then the power revenue requirement is -- of course, paid by first preference customers and base resource customers.

Next slide.

2.4

And similar to the previous example, on this slide, we are showing an allocation of energy imbalance charges. In this particular example, we are showing the allocation of uninstructed imbalanced energy charges. They would flow through from CAISO to BANC and then BANC would allocate the charges between WAPA and the transmission provider and the other participating EIM entities, and that would be based on our net energy load percent. Again, we would have the -- for the charges that are allocated to WAPA as the transmission provider, they would be further allocated to WAPA merchant and other transmission customers under WAPA's tariff. And again, this is where those new proposed EIM rate schedules some in. Specific

for this uninstructed imbalanced energy charge, we would use rate schedule CV-EIM4S for energy imbalance service.

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For those charges that are allocated to WAPA merchant, they will then be sub-allocated as a Tier 2 allocation to the power revenue requirement. So this kind of gives you an example of how we see those charges flowing through from CAISO all the way through to the power revenue requirement. We thought that might be a helpful illustration to share. Next slide, please.

In addition to the new EIM rate schedules, we also have revisions to existing rate schedules. As I previously shared, we have the new EIM rate schedules for energy imbalance -- that's CV-EIM4S -- and for generator imbalance and that's schedule CV-EIM9S. And this is to recover those related costs that are incurred during EIM participation. WAPA will also need to retain our existing energy imbalance and generation imbalance rate schedules to allow for cost recovery of services that we provide outside of EIM, should EIM ever be suspended. The existing EI and GI rate schedules currently allow for energy imbalance and generator imbalance settlement through energy that is returned

1 in kind. 2 WAPA's proposing to revise the existing 3 rate schedules to require financial settlement, so the revised proposed rate schedules will be referenced as 4 5 CV-EID5 and CV-GID2. Next slide, please. 6 For the existing energy imbalance 7 schedule, we are proposing revisions to settle 8 deviations within BANC financially; whereas, before, 9 we settled with in-kind energy rather than financially. So the existing component one for 10 energy imbalance service states that there will be no 11 12 financial settlement deviations within our bandwidth 13 and allows for energy to be returned in kind. 14 So the proposed revision, we propose to 15 settle deviations within our bandwidth financially at 16 the greater of the California Independent System 17 Operator market price or WAPA's actual cost. Next slide. 18 Similar to the revisions that were made 19 20 to the energy imbalance rate schedule, we are proposing to revise our existing generator imbalance 2.1 22 schedule to also settle financially rather than with in-kind energy. So very similar to the previous 23 2.4 slide. The existing component one for generator 25 imbalance service states that there will be no Page 107

1	financial settlements of deviations within the
2	bandwidth and it allows for energy to be returned in
3	kind.
4	The proposed revised component one, we
5	propose to settle deviations within our bandwidth
6	financially at the greater of CAISO's market price or
7	WAPA's actual cost. Next slide, please.
8	Okay, this takes us to the end of this
9	portion of the presentation on the new proposed rate
10	schedules. Before we turn it over to the next
11	presenter, I'll check in with Koji to see if there are
12	any questions on this portion of the presentation.
13	KOJI KAWAMURA: Thank you, Autumn. I
14	don't see any questions in the chat. Tony, do you
15	have any raised hands?
16	TONY HENRIQUEZ: I don't see any raised
17	hands right at this moment and I think the only thing
18	I have is the clarification from Ms. Regina Rieger
19	I'm sorry, not a clarification, she was saying thank
20	you for the clarification on the N/A applicable rate
21	schedule on slide 75. So
22	KOJI KAWAMURA: Okay.
23	TONY HENRIQUEZ: all I have.
24	KOJI KAWAMURA: Okay. So let's on go
25	ahead and open up the phone lines. Okay. And I'm
	Page 108
	rage 100

1	going to go ahead and unmute Ryley. Ryley, do you
2	have any questions?
3	RYLEY KELLY: No, no questions. Thank
4	you.
5	KOJI KAWAMURA: Thank you. All right.
6	So let's go on ahead. Seeing there are no additional
7	questions, let's go on ahead and move to the next
8	presenter.
9	MS. WOLFE: Okay. So the next
10	presenter is Ms. Rosemary Jones. She's our power
11	marketing and energy services specialist and she will
12	share information on the sale of surplus products.
13	ROSEMARY JONES: Okay. Next slide.
14	Good afternoon. I'm Rosemary Jones, power marketing
15	advisor. Sierra Nevada is aligning our rates
16	schedules with the rest of WAPA by using sale of
17	surplus products, normal rate schedule for grouping
18	energy, frequency response, regulation, reserves, and
19	resource efficiency together in our current rates
20	process.
21	Surplus products are available after
22	meeting statutory operational and SBA requirements and
23	after the power marketing program allocations happen
24	in the two-day ahead process. It does not include
25	boat transmission or BA balancing in real time,

	arthough the rate schedules may apply to pre-owned
2	contracts.
3	Surplus products are only available
4	under specific conditions. One, under a rate
5	schedule; two, the product or program design does not
6	impact statutory requirements, operations, SBA
7	balancing or base resource availability and maintains
8	water neutrality; three, availability is based on
9	varying conditions and limitations; and four, all
10	sales surplus products are under agreement or contract
11	with WAPA. Sierra Nevada has been engaging in the
12	following surplus product sales as a benefit to our
13	customers. PRR costs: During this time, reclamation
14	from WAPA have worked to remain water neutral in
15	providing surplus products. Next slide.
16	Okay. Autumn has asked me to present
17	the sale of surplus products proposed rate schedule,
18	SVSSP1. For component one, WAPA SNR shall determine
19	the charge for each product at the time of sale to
20	either the greater of WAPA Sierra Nevada's costs or
21	market rates to include transmission charges. WAPA
22	Sierra Nevada shall use a separate agreement to
23	specify the terms of the sales.
24	The customer may be responsible for
25	acquiring additional transmission service necessary to
	Page 110

deliver the products for which a separate charge may be incurred from the transmission provider.

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2.4

Next slide, please. Save. So the products that we are currently doing. Current products were presented to our customers before pilot testing occurred. (Inaudible) was a collaboration between WAPA and its customers at the Sierra Nevada customer coordination committee meetings. These initial products have provided roughly \$49 million in revenue. I will now briefly review the current products and then present frequency response and resource sufficiency.

Under the energy heading, is -- first, is (inaudible) During the one-day ahead training process, Sierra Nevada trader purchases energy in the lower price off-peak hours and sells the energy is the higher priced peak hours by moving the water from the off-peak hours to the peak hours. The trader receives bids for buying and adjust for any transmission or transaction cost and selects the lowest total cost bid. Utilizing a set of price forecast tools, including adjustments for transmission or transaction cost, the trader compares offers against the adjusted forecast price in our tools to determine the best offer.

1 The buy and sell positions are sent by 2 email to our WSTP trading partners under agreement with WAPA and follows in the proper risk rating as 3 determined by Sierra Nevada's risk management 4 5 committee and/or may be purchased and/or sold within 6 the Cali ISO day-ahead market. 7 Additional energy may happen when there 8 is a day ahead or real time generation change. 9 Infrequently, declamation will contact resources or real time merchants and request a sale of energy for 10 11 water balancing requirements to avoid spilling the 12 water. 13 Next is spinning reserves. (Inaudible) Spinning reserve are available to adjacent 14 15 BA trading partners or the Cali ISO day-ahead market. 16 Sierra Nevada bids the energy at the top of the market 17 rate of \$1,000 and the capacity of the Cali ISO day-18 ahead capacity price. Most of the spin capacity has been sold to the Cali ISO market and while the energy 19 20 has been dispatched, it has only happened a handful of times, mainly during Cali ISO reliability testing. 2.1 22 Regulation up/down product is only transacted with 23 Cali ISO and at this time we have determined just regulation up is beneficial. Regulation down is 2.4

currently on hold due to the complexity of providing

25

1 it to the day-ahead market. Those are our current 2 products. Next slide, please. 3 Frequency response reserve. With the expected retirement of (inaudible) requirement 2 that 4 5 mandates 50 percent of an entities contingency reserve are held as spinning reserve. BANC working in 6 collaboration with the WAPA SPA developed a new 8 approach for meeting the BA's reserve obligation, 9 Frequency response reserve or FRR. 10 At present time, the retirement 11 (Inaudible) -2A is on indefinite hold by (Inaudible). 12 Our BANC is going to take part in local trials this 13 November. Failing (inaudible), FRR would result in the BAA being penalized. Next slide. FRR has a 14 15 spinning capacity that responds to frequency 16 deviations within 30 seconds and maintains response 17 for at least 2 minutes until frequency deviation is corrected. Automatic response is a requirement for BA 18 19 generators to correct frequency deviation with no 20 operator intervention. FRR has contributed -- FRR 2.1 contributed is based on .1 Hz deviation from scheduled frequency, typically 60 Hz. The most severe single 22 23 contingency or MSSC requires sufficient reserve 2.4 capacity to recover from the MSSC as it does today. 25 Sierra Nevada's MSSC will continue to

be 100 MW and will continue to require spinning capacity. Today we have 50 MW of spin and 50 MW of non-spin to meet our MSSC. In the future, FRR spinning capacity will be 11 MW and contingency reserve will be 89 MW. This lowers the amount of spinning reserve required to be online for operation by 30 MW. However, this does not equate to an increase of surplus capacity. Presently, we do not have assumptions or predictions on the level decrease we may see from spinning reserve. Expectation is -- there's a heavy dependence on water level and drought conditions which contribute to surplus products. Next slide, please.

CPV units can provide FRR. Generators can also provide FRR or so. WAPA Sierra Nevada is planning to explore selling any surplus FRR to neighboring BA SBAs in the Cali ISO. FRR could be offered the same as spinning reserve today and will be at a similar rate. It is predicted that frequency response will be more valuable than spinning reserve. Implementation is planned for April 2021 at this time; however, there may be an opportunity to implement earlier based on generator response testing results. The USBR is requesting acceleration of implementation to conserve water this year. Next slide, please.

1	Resource efficiency is not a
2	regulation-type product. It is capacity (inaudible),
3	shown to the market through an energy bid which market
4	awards might dispatch. The IM entities must show they
5	have adequate capacity to balance load and manage
б	contingencies through the resource efficiency
7	evaluation series of four tests: balancing, bid
8	capacity, flex ramp, and feasibility. The five
9	participating BANC members including WAPA passed or
10	failed resource sufficiency tests at a collectively
11	as one BAA.
12	WAPA intends to offer surplus capacity
13	to be available for either test at the discretion of
14	the purchaser. The surplus capacity will come from
15	moving current sales of surplus products such as
16	regulation and spin, by not offering these to the Cali
17	IOS day-ahead market as we do today, and instead,
18	using the capacity as the resource efficiency product.
19	With the rate schedules for regulations, spin, and
20	resource sufficiency align we do not expect a decrease
21	in benefits by making this change.
22	Sierra Nevada is looking at agreements
23	or contracts for an annual product as well as an
24	additional product during the one day ahead trading
25	period. It is expected there will be hours when

1 Sierra Nevada does not have surplus product for sale, 2 and in fact, an early study has shown there will no flex ramp-up available June through September, hours 3 20 to 23 while this merchant will be responsible for 4 5 selling and scheduling the resource sufficiency balancing product. 6 7 WAPA will address the energy behind the 8 capacity in a similar fashion to the energy behind 9 spin that may produce additional benefits if the market call is equal to or greater than WAPA's bid 10 11 price. There have been times when the prices have 12 been set to the cap of \$1,000 for 15 minutes. Sierra 13 Nevada by reclamation will address water usage to ensure water neutrality just as is done for our 14 15 current programs today. Next slide. 16 Resource sufficiency supplies --17 resource sufficiency balancing product supplies a resource movement in the direction necessary for the 18 BA to pass the balancing test. The hourly balancing 19 20 test ensures the BAA has the capability of balancing resources to load for each operating hour to avoid 2.1 22 leaning on neighbors. 23 Working together is mutually beneficial to avoid penalties. Passing the balancing 2.4 tests protects all members including WAPA from 25

1 potential market penalties for under and over 2 scheduling. Resource sufficiency balancing helps to 3 resolve generator imbalance and energy imbalance by meeting the market balance test that (inaudible) is 4 5 supporting. The proposal for offering resource 6 7 sufficiency balancing products through the merchant is 8 designed to cover any cost that may be incurred by 9 WAPA for supplying the product, making it cost neutral. A benefit comes from penalty cost avoidance 10 11 as well as any energy sales which are priced to be 12 sold and dispatched by the market. Next slide, 13 please. Resource sufficiency flex ramp products 14 15 shows the available capacity through energy bids 16 beyond the required resources in the balancing test, 17 also known as base schedule. The 15-minute flex ramp ensures the BAA has the sufficient ramping capability 18 19 to meet forecasted uncertainties such as demand, 20 unobstructed deviation or forced outages. 2.1 design does not let capacity that is used for balancing to count for passing the flex ramp; 22 23 therefore, the resource sufficiency product cannot be used for both tests in the same hour. 2.4 25 WAPA will ensure energy bids are

sufficient to meet our flex ramp capacity requirements ahead of surplus sales. Flex ramp is extremely to predict with 100 percent accuracy so just by all BANC members' best efforts, it is possible the BAA will fail occasionally. Failing flex ramp results in no EIM participation for the next 15 minutes or longer until the test is passed and financially equates to lost opportunities to realize dispatch benefits from the market. (Inaudible) has seen very infrequent failures at a single interval level during their participation.

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We do expect more opportunity to participate in -- in the EIM with this change and any additional revenues will go to the PRR. These revenues may happen if the EIM markets clears at or above our bid price. We intend to achieve water neutrality each day. We will continue to deliver our firm product as we do today and beneficially optimize the value of the hydropower resource of the CVT system in our real time. Once EIM -- once an EIM, Sierra Nevada will continuously elevate the resource sufficiency product and amount of capacity available as well as benefits. There will be transparency reporting and communications with the customers at the customer meetings as happens today with the other

1	surplus products.
2	So coming up next is Mr. Robert Delizo,
3	SNR's resources and prescheduling manager and he will
4	present where resource sufficiency products fit in the
5	generation range dispatch. We will now go to Koji.
6	KOJI KAWAMURA: Thank you, Rosemary.
7	Does anyone have anything else? Any questions in the
8	chat? Tony, did you have any raised hands?
9	TONY HENRIQUEZ: I do. I have one
10	raised hand. Let me go ahead and bring up Ms. Regina
11	Rieger. Let's see. Go ahead, Regina.
12	REGINA RIEGER: Thank you. Thank you
13	for your presentation, Rosemary. My question relates
14	to slide 86. There's a reference to 11 MW of
15	frequency response reserve. Can you clarify is
16	that the surplus product or is that the sub BA
17	requirement?
18	ROSEMARY JONES: That is the sub BA
19	requirement. So on the left is the current
20	requirement and on the right, under FRR, will be the
21	requirements.
22	REGINA RIEGER: Is there a specific
23	charge for that frequency response reserves related to
24	the FDA? ROSEMARY JONES: I would have to ask
25	Autumn.

1	AUTUMN WOLFE: Okay. So for frequency
2	response reserve, there's still not a market
3	necessarily for it. And until we start seeing a
4	market for it, we will use our existing spin rate for
5	FRR, but then as soon as we see a market developed
6	for frequency response reserve, then we will use the
7	existing market rate the greater of the existing
8	market rate or what was our cost.
9	REGINA RIEGER: Okay. So clarification
10	on that point. Is that related to the surplus
11	product?
12	AUTUMN WOLFE: Yes. I'm sorry. Is
13	that what you were speaking to? I thought you were
14	speaking to the surplus product that we would market
15	under the sale of surplus products.
16	REGINA RIEGER: It didn't sound like
17	the 11 MW that's referenced on slide 86 is a surplus
18	product but a sub BA requirement.
19	AUTUMN WOLFE: Oh, the sub BA
20	requirement. So you're asking what we charge the sub
21	BA for the 11 MW?
22	REGINA RIEGER: Correct. And I guess
23	my analogy would be to potentially regulation, right.
24	There's a regulation requirement in the sub BA.
25	AUTUMN WOLFE: Okay.

1	REGINA RIEGER: Yeah. So if there
2	could be an analogy there to what this frequency
3	response reserve requirement looks like in the BA
4	sub BA.
5	AUTUMN WOLFE: Okay. So I'm going to
6	have to do some more research on that and we can
7	definitely write your question down and provide a
8	formal response to that at a later time. I apologize
9	for not having that right off the top of my head here.
10	I apologize.
11	REGINA RIEGER: Thank you.
12	AUTUMN WOLFE: Thank you.
13	KOJI KAWAMURA: Okay. Do you have more
14	questions, Tony?
15	TONY HENRIQUEZ: I do not see any on
16	the chat or raised hands and if I
17	KOJI KAWAMURA: (Inaudible) cell phone.
18	TONY HENRIQUEZ: Okay. We'll let you
19	know. Okay. So I am unmuting Ryan, do you have
20	any questions Mr excuse me Ryley Kelly?
21	RYLEY KELLY: Nope. No questions.
22	TONY HENRIQUEZ: Thank you. And then I
23	have one other sorry.
24	KOJI KAWAMURA: Go ahead.
25	TONY HENRIQUEZ: I have one other call-
	Page 121

1	in user recent call-in user, number 27. Let's see.
2	Phone number 916-934. Do you have any questions? I
3	heard you briefly but I guess not. Okay.
4	KOJI KAWAMURA: Okay. Seeing there are
5	no questions so let's go on ahead and move on to the
6	next presenter.
7	AUTUMN WOLFE: Okay. So next up, as
8	Rosemary mentioned, we have Robert Delizo, our
9	resources and scheduling manager and he will share
10	information with us on the EIM generator dispatch
11	(inaudible). Thank you, Robert.
12	ROBERT DELIZO: All right. Can you
13	guys hear me?
14	AUTUMN WOLFE: We can hear you. Thank
15	you. ROBERT DELIZO: Okay. So I was planning to share
16	my screen but it doesn't look like I can do that for
17	now. So go ahead and just manage with using the pdf.
18	So the goal of this presentation is to give
19	demonstrate the allocation of the CVP generation as
20	far as bidding resources under EIM.
21	So first let's look the allocation of
22	the CVP generation as it correlates with the current
23	(inaudible) test and is not (inaudible) for one hour.
24	It's shown here for CVP generation at
25	flat level and also the full demand. References for

1	the flat levels are the (inaudible) shown where EIM
2	resources and demands are also grouped into
3	corresponding EIM demand components at the bottom.
4	So first, we found out through that
5	column on the table above shows the generational
6	schedule for the hour at the flat level. So the high
7	megawatts represent the maximum capacity available
8	from the online units and the low megawatts represent
9	the minimum generation level based on operational
10	constraint.
11	So in this case, Trinity number 2
12	that unit has 10 MW of demand and also (inaudible) the
13	generation corresponds to meeting environmental
14	requirements. So for (inaudible), both the high
15	megawatt and low megawatt are set by your schedules.
16	So besides the CVP generation other elements of
17	existing contributors to the WAPA FCA balancing
18	position leading to EIM timeline are the import
19	schedules, our export schedules, the load in the FBA,
20	as well as the WAPAs. If you need more details for
21	imports, this will be representing capital/loss
22	paybacks, emergency paybacks due to WAPA, including
23	purchases that will sink into the FDA.
24	For demand, the exports could be
25	project case load and the ISO BAA. Also first

1 reference load's in there. Also base resource that is 2 imported to the ISO as well. Also exports can be the base resource allocations for customers that are in 3 the ISO as well as in BANC or GID. So -- and also 4 5 exports could be the emergency paybacks that emanate 6 from SMR FDA. The purchases that are not used by (inaudible) -- that also gets imported into the 8 (inaudible). And from the point of view of the FBA, 9 those are exports as well. That is also true for the (inaudible) 10 11 sales and real time purchases that sink outside of the 12 So in terms of load -- we kind of touched on 13 this earlier. These are projects (inaudible) load in the FBA like (inaudible) pumps, first preference load 14 15 in the FBA like Trinity (inaudible) district loads. 16 Full load service and basic (inaudible) customers in 17 the FBA and of course, the (inaudible). So in the table below, DDR -- that 18 19 pertains to nonconforming load that are modeled as 20 NGRs of dispatchable demand resource time that WAPA 2.1 does not intend to submit reprise bids so they are not 22 going to be curtailed by the ISO. Their basic 23 schedules will be treated as self-schedules under EIM 2.4 and this was mentioned earlier are the Lawrence

(inaudible) load and (inaudible) load.

25

1 Of course, lots of here pertains to 2 the COTP lost forecast. A load pertains to the small loads in the FDA -- that CPUD load -- and the 3 interchange are basically the net of the imports and 4 exports. And as mentioned earlier, we are not 6 exporter of energy from the FDA. 7 So to the following is the illustration 8 of how we would determine the EIM bid range for 9 (inaudible), it being 75 as one EIM resource. So as 10 shown here on the expected demand, I think -- Sonja, 11 if you're controlling it, you can go ahead and click. 12 So the (inaudible) accounts for the regulation down at 13 capacity for the FDA. Go ahead and click some more. Okay. 14 15 That's good. So the (inaudible) accounts for the 60 16 MW of regulation down, capacity for the FDA and the 17 (inaudible) accounts for the 60 MW of break-up 18 capacity for the FDA as well as our contingency 19 These are capacity (inaudible) so we'll not reserves. 20 dispatch for (inaudible) energy under EIM. So we -- maximum bid range between 130 2.1 22 MW and 1508 MW. So WAPA fixed schedule here -- we'll need to fall within this range and as you can see, 23 that is represented by the red line for the -- WAPA is 2.4 25 438 MW. Okay. Keep going. Let's go to the next

1 slide. 2 This slide takes into account the 3 proposed resource sufficiency product assuming 4 there's still megawatts of regulation capacity that 5 is available. That capacity will be allocated for 6 use in EIM. Under this premise, the base schedules for reg up and reg down will be 50 MW and this will 8 result in an expanded bid range for WAPA's 9 participating resources. 10 As an example, WAPA may adjust the 11 schedule for the generators up if that is needed to 12 compensate for another member's short position in case 13 of generator's basic schedule. This way, BANC as the EIM entity, will pass the balancing test of the 14 15 resource sufficiency test. And as Rosemary mentioned, 16 the expanded bid range will also provide more capacity 17 for use in the flex (inaudible) test of the resource 18 sufficiency test. 19 Some more. So basically, you can see 20 here that the mid-range is now between 120 MW and 2.1 1,518 MW. And that expansion of the mid-range is 22 attributed to us moving the 10 MW of (inaudible) 23 product into EIM. All right. So let's go to the next 2.4 slide. 25 This slide shows a particular day in Page 126

1 resource dispatch simulation. It shows how incremental and decremental dispatches keep a 2 water- neutral operations at the end of day. 3 4 So the green columns represent the 5 aggregate energy for the hour, and the gold columns, 6 basically, represent the (inaudible) energy for the The blue line represents the cumulative net hour. 8 energy from incremental and decremental dispatches and 9 as you can see in hour 24, that ends at zero. maroon or brown and blue areas use the secondary scale 10 11 on the right. They represent the sale benefit and 12 purchase benefits, respectively. And the light blue 13 area is the sum of both the sale and purchase benefits 14 for this capacity. 15 So this is basically representing the 16 50 MW of approximate resource that we ran in our 17 simulation and a similar chart is prepared for the 10 18 MW of capacity that we intend to move from regulation 19 to EIM. 20 So let's go to that in the next slide. So similarly, this is the potential dispatch and 2.1 22 associated benefits of the 10 MW capacity proposed for the resource sufficiency product. The chart 23 24 components are the same as the previous slide. scale values are different, but again, the intent here 25

1	is the blue line starts close to zero at the same time
2	and goes to zero at hour 24.
3	So that concludes the presentation on
4	DIM generator dispatch ranges. I'd be happy to answer
5	questions at this time.
6	KOJI KAWAMURA: Thank you, Robert. I
7	don't see any questions appearing in the chat. Tony,
8	do you see any raised hands?
9	TONY HENRIQUEZ: I don't see any raised
10	hands at this moment. I'm checking to see if there's
11	anything on chat. Nothing on chat.
12	TONY HENRIQUEZ: Okay. So let's go
13	ahead and open up the phone line. Okay. Ryley Kelly,
14	do you have any questions?
15	RYLEY KELLY: No questions. Thank you.
16	TONY HENRIQUEZ: Thank you. And then I
17	have call-in user 27 with phone number 916-934. Do
18	you have any questions?
19	ADAM SANTINO: Hi, Tony. This is Adam
20	Santino. I don't have any questions.
21	TONY HENRIQUEZ: All right. Thank you,
22	Adam.
23	KOJI KAWAMURA: Let's see. No
24	additional questions. Let's go on ahead and move to
25	the next presenter.

1	AUTUMN WOLFE: All right. Next slide,
2	please. Okay. So this takes us to the end of our
3	presentation for today. Next slide, please. I'd just
4	like to share these additional resources with you.
5	These are some of the websites with links to our
6	website for our rate case for rate case 194. And
7	then we have our SNR EIM information webpage where we
8	share a little bit more information on participating
9	in EIM.
10	And so if you have any questions you
11	would like to follow up with us on, please feel free
12	to contact us using our SNR rate case email address
13	that's here on the bottom on the screen. The email
14	address is SNR, dash, rate case, at WAPA, dot, gov.
15	And with that, I'll go ahead and turn
16	it over to Koji for closing remarks.
17	KOJI KAWAMURA: Thank you, Autumn. I
18	would just like to remind everyone that we will
19	holding a public comment forum at which WAPA will
20	receive oral and written comments. This comment forum
21	will start in around 20 minutes, starting at one
22	o'clock Pacific time today.
23	In addition, at any time during the
24	comment period, you may submit written comments to
25	WAPA. All written comments must be submitted prior to

1	the end of the consultation and comment period.
2	Consultation and comment period closes on October
3	29th, 2020. Written comments should be sent to Ms.
4	Sonja Anderson, Regional Manager, (Inaudible) Power
5	Administration, 114 Parkshore Drive, Wilson,
6	California, 95630. Email: snr, hyphen, rates case,
7	at WAPA, dot, gov.
8	So I want to thank everyone for
9	attending this forum. If you have and I think
10	thank you for attending this forum and your interest
11	and participation. And with that, I'm going to go on
12	ahead and close the public information forum and we
13	will see you in 20 minutes for the public comment
14	forum. And with that, we'll go off the record for the
15	information forum. Thank you everyone.
16	(Break)
17	KOJI KAWAMURA: All right. If we can
18	go on ahead and go back on the record.
19	Good afternoon, everyone, and welcome
20	back to WebEx for Western Area Power Administration's
21	public comment forum. Those formula rates for the
22	energy balance market service, sale of surplus
23	product, and revisions to the existing energy and
24	balance generator, and balance rate schedules. Rate
25	order, RAPA number 194.

My name is Koji Kawamura. I'm attorney
with WAPA's office of general counsel and I'm going to
be presiding as moderator for today's comment forum.
Most if not all of you should have received a letter
or email from WAPA informing you of today's public
comment forum. WAPA also published a notice of
today's comment forum in the July 31st, 2020, Federal
Register, Volume 85, page 460.
AUTOMATED VOICE: This meeting is being
recorded.
KOJI KAWAMURA: Federal Register,
Volume 85, Page 460-03. And a copy is also on WAPA's
website.
website. Finally, WAPA provided notice of this
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Finally, WAPA provided notice of this public comment forum at the public information forum
Finally, WAPA provided notice of this public comment forum at the public information forum which was held earlier today. We are meeting today
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Finally, WAPA provided notice of this public comment forum at the public information forum which was held earlier today. We are meeting today for a public comment forum. As noticed, the purpose of this comment forum is to give interested parties the opportunity to make oral presentations or to submit written comments on the proposed formula rates. If you don't have oral or written comments prepared for today's public comment forum,

1 ends on October 29th, 2020. All comments must receive 2 by that date to be assured (Inaudible). 3 I want to make sure that everyone's aware, there are verbatim transcript of today's forum 4 5 that is being prepared by our court reporter. Everything said while we were in session today, 6 together with all presented documents, will be part of the official record. You can purchase a copy of 8 9 today's transcript directly from the court reporter. 10 The court reporter's name, address, and telephone 11 number are available from WAPA by request. Copies of 12 the transcripts will also be available for review at 13 WAPA Sierra Nevada customer service (Inaudible) and on 14 the website. 15 Because of COVID, we're still avoiding 16 large in-person meetings and I want to thank everyone 17 for attending this virtual meeting. Given the 18 logistics of a very large meeting, to avoid microphone 19 feedback, we are muting everyone but the speaker. 20 you have questions or comments that you want to bring 21 up today, please raise your virtual hand or you can notify us that you want to talk in -- by putting a 22 note in the comment section. 23 2.4 If you don't have access to the web and are participating by phone, we will open up the phone 25

1	lines after we go through the hands and the chat
2	questions or the comments, I mean. I wanted to
3	make sure that we get an accurate attendance of
4	today's record strike that.
5	I want to make sure we get an accurate
6	record of today's attendance and so if you have signed
7	in via the web interface, we already have your name
8	and contact information and the organization you
9	represent. If you haven't signed in via the web chat
10	or via the web, I'm going to open up the phone lines
11	now we can have you identify yourself and identify who
12	you represent.
13	Tony, if there are any people on the
14	phone if you can go ahead and open up the phone
15	lines for them.
16	TONY HENRIQUEZ: Okay. So this is Tony
17	Henriquez. I am checking to see I'm going to go
18	ahead and open up the phone line and it looks like the
19	only line that I have is I believe it's Ryley
20	Kelly. Ryley, will you go ahead and state your all
21	your information, please.
22	RYLEY KELLY: Yeah, hi. My name is
23	Ryley Kelly. I'm an electric business analyst on the
24	power supply team of the city of Roseville.
25	TONY HENRIQUEZ: Thank you, Ryley.

1 That's the only line that I have, Koji. 2 KOJI KAWAMURA: Okay. Great. Thank 3 you, Tony. All right. So just in terms of the process, after we've -- if you want to comment, just 4 go on ahead and drop a note in the chat or raise your 6 Then we'll go on ahead and start. As the hands are raised, I will go on ahead and take those 8 comments. You will have the opportunity to present 9 your comments. And like I said, if you don't have 10 comments prepared today, you can present them at any 11 time during the comment period. 12 And just a reminder that all comments 13 should be relevant to the proposed rates. As a 14 moderator, I do reserve the right to disallow comments 15 that aren't relative. 16 And I'd like to take a moment to 17 introduce the panel. We have today with us Arun 18 Sethi, WAPA's power marketing manager; Autumn Wolfe, 19 WAPA's rates manager; Mark Lynch, a rate specialist; 20 Jody Wooten a rate specialist; Corrie Stewart, a rate 21 specialist; and other subject matter experts may also 22 be available. So at this point time, I'm going to go on ahead and open up the floor. I'm not actually 23 24 seeing any questions in the chat. Tony, do you have any hands raised? 25

1	TONY HENRIQUEZ: I do not see any
2	raised hands at this time and I do not see any on my
3	chat inbox.
4	KOJI KAWAMURA: Okay. Well, why don't
5	we just give it another minute and let people think
6	about it, and if not, I'm going to go on ahead and
7	prepare our closing remarks here.
8	All right. So seeing that there are no
9	comments today, I just want to remind everyone that
10	you can still submit written comments. All written
11	comments must be submitted prior to the end of the
12	consultation and comment period to be sure for
13	consideration. The consultation and comment period
14	ends on October 29th, 2020, and written comments
15	should be sent to Ms. Sonja Anderson, Regional
16	Manager, Sierra Nevada Region, Western Area Power
17	Administration, 114 Parkshore Drive, Wilson,
18	California, 95630, or you can email them to snr,
19	hyphen, rate case, at, WAPA, dot, gov. After the
20	close of the public comment period, WAPA
21	representatives will review all the information in the
22	comments and documents that have been received with
23	regards to this process. WAPA will then announce its
24	decision in the Federal Register at some point after
25	the close of the comment period. All comments
	Page 135

1	including those made during the comment forum will be
2	discussed in this announcement.
3	I want to thank everyone for attending
4	the public information forum and the public comment
5	forum, and if you have not already done so, you know,
6	please take this last opportunity to identify yourself
7	for the record. Tony, is there any additional people
8	on the phone that have joined in?
9	TONY HENRIQUEZ: I do not see any
10	others other than the one.
11	KOJI KAWAMURA: Okay. All right.
12	Well, with that, then I want to thank everyone for
13	your interest in this proceeding and thank you for
14	attending today. We're going to go ahead and close
15	the public comment forum and you're more than
16	welcome to submit comments written comments as
17	described above and described in the Federal Register
18	notice. Thank you and we can off the record now.
19	(Whereupon, at 1:00 p.m., the
20	proceeding was concluded.)
21	
22	
23	
24	
25	

CERTIFICATE OF NOTARY PUBLIC

I, Gigi Lastra , the officer before whom the foregoing proceedings were taken, do hereby certify that any witness(es) in the foregoing proceedings, prior to testifying, were duly sworn; that the proceedings were recorded by me and thereafter reduced to typewriting by a qualified transcriptionist; that said digital audio recording of said proceedings are a true and accurate record to the best of my knowledge, skills, and ability; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this was taken; and, further, that I am not a relative or employee of any counsel or attorney employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.



Gigi Lastra

Notary Public in and for the State of California

1 CERTIFICATE OF TRANSCRIBER 2 I, Sonya Ledanski Hyde, do hereby certify that this transcript was prepared from the 3 digital audio recording of the foregoing proceeding, 4 5 that said transcript is a true and accurate record of 6 the proceedings to the best of my knowledge, skills, and ability; that I am neither counsel for, related 8 to, nor employed by any of the parties to the action 9 in which this was taken; and, further, that I am not a relative or employee of any counsel or attorney 10 11 employed by the parties hereto, nor financially or 12 otherwise interested in the outcome of this action. 13 14 15 Songa M. deslande Hyde 16 17 18 Sonya Ledanski Hyde 19 20 2.1 22 23 2.4 25

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